NAME
>   foo2zjs-wrapper – Convert Postscript into a ZJS printer stream

SYNOPSIS
>   **foo2zjs-wrapper** [*options*] [*ps-file*]

DESCRIPTION
>   **foo2zjs-wrapper** is a Foomatic compatible printer wrapper for the **foo2zjs** printer driver. This script reads
>   a Postscript *ps-file* or standard input and converts it to Zenographics ZjStream printer format for driving the
>   Minolta/QMS 2300 DL network color laser printer and other Zenographics-based printers.
>
>   This script can be used in a standalone fashion, but is intended to be called from a printer spooler system
>   which uses the Foomatic printer database.

COMMAND LINE OPTIONS

Normal Options
>   These are the options used to select the parameters of a print job that are usually controlled on a per job
>   basis.

>   **−c**   Print in color (else monochrome).

>   **−C** *colormode*
>>   Color correction mode [0].
>> | | |
>> |---|---|
>> | 0 | Best compromise |
>> | 1 | Photos (using m2300w CRDs) |
>> | 2 | Photos and text (using m2300w CRDs) |
>> | 3 | Graphics and text (using m2300w CRDs) |
>> | 10 | ICM color profile (using -G *.icm file) |

>   **−d** *duplex*
>>   Duplex code to send to printer [1].
>> | 1 | off | 2 | long edge | 3 | short edge |
>> |---|---|---|---|---|---|

>   **−m** *media*
>>   Media code to send to printer [1].
>>
>> | Media | 2300DL | 2200DL |
>> |---|---|---|
>> | standard | 1 | 1 |
>> | transparency | 2 | 2 |
>> | envelope | 257 | na |
>> | letterhead | 259 | na |
>> | thick | 261 | 4 |
>> | postcard | 262 | na |
>> | labels | 263 | 3 |

>   **−p** *paper*
>>   Paper size code to send to printer [1].
>>
>> | 1 | letter | 9 | A4 |
>> |---|---|---|---|
>> | 5 | legal | 11 | A5 |
>> | 7 | executive | 13 | B5 |
>> | 20 | env #10 | 27 | env DL |
>> | 28 | env C5 | 34 | env B5 |
>> | 37 | env Monarch | | |

>   **−n** *copies*
>>   Number of copies [1].

−r *xres***x***yres*

  Set device resolution in pixels/inch [1200x600].

−s *source*

  Source (Input Slot) code to send to printer [7].

1	upper	4	manual
2	lower	7	auto

−t   Draft mode. Every other pixel is white.

−2 −3 −4 −5 −6 −8 −9 −10 −12 −14 −15 −16 −18

  Print in N-up. Requires the **psutils** package.

−o *orient*

  Orientation used for N-up.

Portrait	-op	(normal)
Landscape	-ol	(rotated 90 degrees anticlockwise)
Seascape	-os	(rotated 90 degrees clockwise)

Printer Tweaking Options

  These are the options used to customize the operation of **foo2zjs** for a particular printer.

−u *xoff* **x** *yoff*

  Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

−l *xoff* **x** *yoff*

  Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

−L *mask*

  Send the logical clipping values from -u/-l in the ZjStream. **foo2zjs-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.

  0   don't send any logical clipping amounts
  1   only send Y clipping amount
  2   only send X clipping amount
  3   send both X and Y clipping amounts

−P   Do not send START_PLANE codes on monochrome output. May be needed by some monochrome-only printers, such as the HP LaserJet 1000.

−X *padlen*

  Add extra zero padding to the end of BID segments. The default is 16 bytes. Padding 16 bytes of zeroes is needed for older ZjStream printers, such as the Minolta 2200DL and HP LaserJet 1000, and seems harmless to newer ones, such as the Minolta 2300DL. So the default should be good for all cases.

−z *model*

  Model: 0=2300DL, 1=HP1020. Default is 0.

Color Tweaking Options

  These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

−g *gsopts*

  Additional options to pass to Ghostscript, such as -g"-dDITHERPPI=nnn", etc. This option may appear more than once.

−G *profile.icm*

      Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. (WORK IN PROGRESS).

−G *gamma-file.ps*

      Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortransfer** Postscript operator. For example, the file might contain:
      {0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer

−I *intent*

      Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2zjs** and its wrapper.

−S *plane*

      Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

      1   Cyan
      2   Magenta
      3   Yellow
      4   Black

−D *level*

      Set Debug level [0].

EXAMPLES

Create a monochrome ZjStream from a Postscript document, examine it, and then print it using a RAW print queue:

      foo2zjs-wrapper testpage.ps > testpage.zm
      zjsdecode < testpage.zm
      lpr -P raw testpage.zm

Create a color ZjStream stream from a Postscript document:

      foo2zjs-wrapper -c testpage.ps > testpage.zc

FILES

/usr/local/bin/foo2zjs-wrapper

SEE ALSO

foo2zjs(1), **zjsdecode**(1)

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
http://foo2zjs.rkkda.com/

NAME

 foo2zjs – Convert Ghostscript pbmraw or bitcmyk format into a ZJS printer stream

SYNOPSIS

 foo2zjs [*options*] *< pbmraw-file > zjs-file*

 foo2zjs [*options*] *< bitcmyk-file > zjs-file*

 foo2zjs [*options*] *< pksmraw-file > zjs-file*

DESCRIPTION

 foo2zjs converts Ghostscript pbmraw, bitcmyk, or pksmraw output formats to monochrome or color ZJS streams, for driving the Minolta/QMS 2300 DL network color laser printer and other Zenographics-based printers.

COMMAND LINE OPTIONS

Normal Options

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

−c   Force color mode if autodetect doesn't work.

−d *duplex*

 Duplex code to send to printer [1].
 │ 1   off │ 2   long edge │ 3   short edge

−g *xpix**x**ypix*

 Set page dimensions in pixels [10200x6600].

−m *media*

 Media code to send to printer [1].

Media	2300DL	2200DL
standard	1	1
transparency	2	2
envelope	257	na
letterhead	259	na
thick	261	4
postcard	262	na
labels	263	3

−p *paper*

 Paper code to send to printer [1].
 │ 1   letter   │ 9   A4
 │ 5   legal   │ 11   A5
 │ 7   executive │ 13   B5
 │ 20   env #10   │ 27   env DL
 │ 28   env C5   │ 34   env B5
 │ 37   env Monarch │

−n *copies*

 Number of copies [1].

−r *xres**x**yres*

 Set device resolution in pixels/inch [1200x600].

−s *source*

>   Source (InputSlot) code to send to printer [7].
>
> | 1 | upper | 4 | manual |
> |---|-------|---|--------|
> | 2 | lower | 7 | auto |

−t   Draft mode. Every other pixel is white.

−J *filename*

>   Filename string to send to printer.

−U *username*

>   Username string to send to printer.

Printer Tweaking Options

>   These are the options used to customize the operation of **foo2zjs** for a particular printer.

−u *xoff* **x** *yoff*

>   Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].

−l *xoff* **x** *yoff*

>   Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].

−L *mask*

>   Send logical clipping amounts implied by -u/-l in the ZjStream [3].
>
>   0   don't send any logical clipping amounts
>   1   only send Y clipping amount
>   2   only send X clipping amount
>   3   send both X and Y clipping amounts

−P   Do not send START_PLANE codes on monochrome output. May be needed by some black and white only printers, such as the HP LaserJet 1000.

−A   AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmyk input only.

−B   BlackClears: K=1 forces C,M,Y to 0. Works with bitcmyk input only.

−X *padlen*

>   Add extra zero padding to the end of BID segments. The default is 16 bytes. Padding 16 bytes of zeroes is needed for older ZjStream printers, such as the Minolta 2200DL and HP LaserJet 1000, and seems harmless to newer ones, such as the Minolta 2300DL. So the default should be good for all cases.

−z *model*

>   Model: 0=2300DL, 1=HP1020. Default is 0.

Debugging Options

>   These options are used for debugging **foo2zjs**.

−S *plane*

>   Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.
>
>   1   Cyan
>   2   Magenta
>   3   Yellow
>   4   Black

−D *level*

>   Set Debug level [0].

EXAMPLES

>   Create a black and white ZJS stream:
>
>   gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE

        -sPAPERSIZE=letter -r1200x600 -sDEVICE=pbmraw
        -sOutputFile=- - < testpage.ps
      | foo2zjs -r1200x600 -g10200x6600 -p1 >testpage.zm

Create a color ZJS stream:

      gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
        -sPAPERSIZE=letter -g10200x6600 -r1200x600 -sDEVICE=bitcmyk
        -sOutputFile=- - < testpage.ps
      | foo2zjs -r1200x600 -g10200x6600 -p1 >testpage.zc

FILES
      /usr/local/bin/foo2zjs

SEE ALSO
      foo2zjs-wrapper(1), **zjsdecode**(1)

AUTHOR
      Rick Richardson <rick.richardson@comcast.net>
      http://foo2zjs.rkkda.com/

NAME

   zjsdecode – Decode a ZjStream into human readable form.

SYNOPSIS

   zjsdecode [*options*] <*zjs-file*

DESCRIPTION

   zjsdecode decodes a ZjStream into human readable form.

   A ZjStream is the printer langauge used by some Minolta/QMS and HP printers, such as the 2300DL and
   LJ-1000.

   More information on Zenographics ZjStream can be found at:

        http://ddk.zeno.com

COMMAND LINE OPTIONS

   These are the options that can appear on the command line.

   –d *basename*

        Basename of .pbm file for saving decompressed planes.

   –r *basename*

        Basename of .jbg file for saving raw planes

   –h   Print hex file offsets.

   –o   Print file offsets.

   –D *level*

        Set Debug level [0].

EXAMPLES

   Decode an ZjStream file created by foo2zjs.

```
$ zjsdecode < testpage.zm
ZJT_START_DOC, 3 items
        ZJI_PAGECOUNT, 0 (0x0)
        ZJI_DMDUPLEX, 1 (0x1)
        ZJI_QUANTITY, 1 (0x1)
ZJT_START_PAGE, 17 items
        ZJI_0x17, 0 (0x0)
        ZJI_0x16, 1 (0x1)
        ZJI_VIDEO_X, 10200 (0x27d8)
        ZJI_VIDEO_Y, 6600 (0x19c8)
        ZJI_VIDEO_BPP, 1 (0x1)
        ZJI_RASTER_X, 10200 (0x27d8)
        ZJI_RASTER_Y, 6600 (0x19c8)
        ZJI_OFFSET_X, 0 (0x0)
        ZJI_OFFSET_Y, 0 (0x0)
        ZJI_NBIE, 1 (0x1)
        ZJI_RESOLUTION_X, 1200 (0x4b0)
        ZJI_RESOLUTION_Y, 600 (0x258)
        ZJI_DMDEFAULTSOURCE, 7 (0x7)
        ZJI_DMCOPIES, 1 (0x1)
        ZJI_DMPAPER, 1 (0x1)
        ZJI_DMMEDIATYPE, 1 (0x1)
        ZJI_MINOLTA_PAGE_NUMBER, 1 (0x1)
```

```
        ZJT_JBIG_BIH, 0 items
                Data: 20 bytes
                        DL = 0, D = 0, P = 1, - = 0, XY = 10200 x 6600
                        L0 = 128, MX = 16, MY = 0
                        Order  = 3  ILEAVE SMID
                        Options = 92  LRLTWO TPDON TPBON DPON
                        52 stripes, 0 layers, 1 planes
        ZJT_JBIG_BID, 0 items
                Data: 65536 bytes
        ZJT_JBIG_BID, 0 items
                Data: 29120 bytes
        ZJT_END_JBIG, 0 items
        ZJT_END_PAGE, 0 items
        ZJT_END_DOC, 0 items
```

FILES
> **/usr/local/bin/zjsdecode**

SEE ALSO
> **foo2zjs-wrapper**(1), **foo2zjs**(1), **jbg2pbm**(1)

AUTHOR
> Rick Richardson <rick.richardson@comcast.net>
> http://foo2zjs.rkkda.com/

NAME

      foo2oak-wrapper – Convert Postscript into an OAKT printer stream

SYNOPSIS

      foo2oak-wrapper [*options*] [*ps-file*]

DESCRIPTION

      foo2oak-wrapper is a Foomatic compatible printer wrapper for the **foo2oak** printer driver. This script reads a Postscript *ps-file* or standard input and converts it to Oak Technology OAKT printer format for driving the HP Color LaserJet 1500 laser printer and other OAKT-based printers.

      This script can be used in a standalone fashion, but is intended to be called from a printer spooler system which uses the Foomatic printer database.

COMMAND LINE OPTIONS

  Normal Options

      These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

      −b *bits* Number of bits per plane (1 or 2) [1].

      −c   Print in color (else monochrome).

      −m *media*

          Media code to send to printer [1].

1	standard	259	letterhead
2	transparency	261	thickstock
3	glossy	262	postcard
257	envelope	263	labels

      −p *paper*

          Paper size code to send to printer [1].

1	letter	9	A4
5	legal	11	A5
7	executive	13	B5

      −n *copies*

          Number of copies [1].

      −r *xres***x***yres*

          Set device resolution in pixels/inch [600x600].

      −s *source*

          Source (Input Slot) code to send to printer [7].

1	upper	4	manual
7	auto		

      −2 −3 −4 −5 −6 −8 −9 −10 −12 −14 −15 −16 −18

          Print in N-up. Requires the **psutils** package.

      −o *orient*

          Orientation used for N-up.

Portrait	-op	(normal)
Landscape	-ol	(rotated 90 degrees anticlockwise)
Seascape	-os	(rotated 90 degrees clockwise)

  Printer Tweaking Options

      These are the options used to customize the operation of **foo2oak** for a particular printer.

−u *xoff* **x** *yoff*

> Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

−l *xoff* **x** *yoff*

> Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

−L *mask*

> Send the logical clipping values from -u/-l in the OAKT stream. **foo2oak-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.
>
> 0   don't send any logical clipping amounts
> 1   only send Y clipping amount
> 2   only send X clipping amount
> 3   send both X and Y clipping amounts

Color Tweaking Options

These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

−g *gsopts*

> Additional options to pass to Ghostscript, such as -g"-dDITHERPPI=nnn", etc. This option may appear more than once.

−G *profile.icm*

> Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. (WORK IN PROGRESS).

−G *gamma-file.ps*

> Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortransfer** Postscript operator. For example, the file might contain:
> {0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer

−I *intent*

> Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2oak** and its wrapper.

−S *plane*

> Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.
>
> 1   Cyan
> 2   Magenta
> 3   Yellow
> 4   Black

−D *level*

> Set Debug level [0].

EXAMPLES

Create a monochrome OAKT stream from a Postscript document, examine it, and then print it using a RAW print queue:

    foo2oak-wrapper testpage.ps > testpage.oak
    oakdecode < testpage.oak
    lpr -P raw testpage.oak

Create a color OAKT stream from a Postscript document:

    foo2oak-wrapper -c testpage.ps > testpage.oak

FILES
       /usr/local/bin/foo2oak-wrapper

SEE ALSO
       foo2oak(1), **oak**(1)

AUTHOR
       Rick Richardson <rick.richardson@comcast.net>
       http://foo2oak.rkkda.com/

NAME
        foo2oak – Convert Ghostscript pbmraw, pgmraw or bitcmyk format into an OAKT printer stream

SYNOPSIS
        foo2oak [*options*] *< pbmraw-file >OAKT-file*

        foo2oak [*options*] *< pgmraw-file >OAKT-file*

        foo2oak [*options*] *<bitcmyk-file >OAKT-file*

DESCRIPTION
        foo2oak converts Ghostscript pbmraw or bitcmyk output formats to monochrome or color OAKT streams,
        for driving the HP color Laserjet 1500 laser printer and other OAKT-based printers.

COMMAND LINE OPTIONS

  Normal Options
        These are the options used to select the parameters of a print job that are usually controlled on a per job
        basis.

        −c   Force color mode if autodetect doesn't work.

        −g *xpix***x***ypix*
                Set page dimensions in pixels [10200x6600].

        −m *media*
                Media code to send to printer [1].

1	standard	259	letterhead
2	transparency	261	thickstock
3	glossy	262	postcard
257	envelope	263	labels

        −p *paper*
                Paper code to send to printer [1].

1	letter	9	A4
5	legal	11	A5
7	executive	13	B5

        −n *copies*
                Number of copies [1].

        −r *xres***x***yres*
                Set device resolution in pixels/inch [600x600].

        −s *source*
                Source (InputSlot) code to send to printer [7].

1	tray1	4	manual
7	auto		

        −J *filename*
                Filename string to send to printer.

        −U *username*
                Username string to send to printer.

  Printer Tweaking Options
        These are the options used to customize the operation of **foo2oak** for a particular printer.

−u *xoff* **x** *yoff*
> Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].

−l *xoff* **x** *yoff*
> Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].

−L *mask*
> Send logical clipping amounts implied by -u/-l in the OAKT stream [3].
> 0   don't send any logical clipping amounts
> 1   only send Y clipping amount
> 2   only send X clipping amount
> 3   send both X and Y clipping amounts

−A   Turn off: conversion of C=1,M=1,Y=1 to pure black.

−B   Turn off: K=1 forces C,M,Y to 0.

Debugging Options
These options are used for debugging **foo2oak**.

−S *plane*
> Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.
> 1   Cyan
> 2   Magenta
> 3   Yellow
> 4   Black

−D *level*
> Set Debug level [0].

EXAMPLES
Create a black and white OAKT stream:

> gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
>   -sPAPERSIZE=letter -r600x600 -sDEVICE=pbmraw
>   -sOutputFile=- - < testpage.ps
> | foo2oak -r600x600 -g5100x6600 -p1 >testpage.oak

Create a color OAKT stream:

> gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
>   -sPAPERSIZE=letter -g5100x6600 -r600x600 -sDEVICE=bitcmyk
>   -sOutputFile=- - < testpage.ps
> | foo2oak -r600x600 -g5100x6600 -p1 >testpage.oak

FILES
/usr/local/bin/foo2oak

SEE ALSO
foo2oak-wrapper(1), **oakdecode**(1)

AUTHOR
Rick Richardson <rick.richardson@comcast.net>
http://foo2oak.rkkda.com/

NAME

       oakdecode – Decode an OAKT printer stream into human readable form.

SYNOPSIS

       oakdecode [*options*] <*OAKT-file*

DESCRIPTION

       oakdecode decodes an OAKT printer stream into human readable form.

       An OAKT printer stream is the printer langauge used by the HP Color LaserJet 1500 and other printers.

COMMAND LINE OPTIONS

       These are the options that can appear on the command line.

       –d *basename*

              Basename of .pbm file for saving decompressed planes.

       –r *basename*

              Basename of .jbg file for saving raw planes

       –i   Suppress display of image records.

       –o   Print file offsets.

       –D *level*

              Set Debug level [0].

EXAMPLES

       Decode an OAKT file created by foo2oak.

```
$ oakdecode < testpage.oak
0d (80) 1 OTHER
0c (64) Wed Nov 05 16:30:50 2003          a07d3    100005   32001e
0a (80) testpage.pdf
14 (16) (no args)
28 (16) Source=Tray1
29 (80) PaperType=0 UNK8=2,0,0,0, blanks(63)
2a (32) Copies=1          UNK=0
2b (32) papercode=25     xwid=4648         ywid=9000          UNK=0
33 (64)
        u0        u1       w        h       resx     resy     nBits
        x0        x0       2128     4300    600      600      x1
15 (16) (no args)
      bih0      w       h      l0      bih5    dlen   plen unk yOff P subP
3c (64) 00010000 2176   256    256  58030020   1050   1056 000   64 3 0
                 DL = 0, D = 0, P = 1, - = 0, XY = 2176 x 256
                 L0 = 256, MX = 32, MY = 0
                 Order   = 3   ILEAVE SMID
                 Options = 88  LRLTWO TPDON TPBON
                 1 stripes, 0 layers, 1 planes
3c (64) 00010000 2176   256    256  58030020   3668   3680 000  320 3 0
3c (64) 00010000 2176   256    256  58030020   1463   1472 000  640 3 0
3c (64) 00010000 2176   256    256  58030020   1975   1984 000  896 3 0
3c (64) 00010000 2176   224    224  58030020   2744   2752 000 1152 3 0
3c (64) 00010000 2176   256    256  58030020    988    992 000 1440 3 0
3c (64) 00010000 2176   256    256  58030020   2892   2896 000 1696 3 0
3c (64) 00010000 2176   256    256  58030020   3634   3648 000 1952 3 0
```

```
     3c (64) 00010000 2176   256   256 58030020   3236   3248 000 2208 3 0
     3c (64) 00010000 2176   256   256 58030020   2279   2288 000 2464 3 0
     3c (64) 00010000 2176   256   256 58030020   3746   3760 000 2720 3 0
     3c (64) 00010000 2176   200   200 58030020   2404   2416 000 2976 3 0
     3c (64) 00010000 2176   256   256 58030020   3114   3120 000 3240 3 0
     3c (64) 00010000 2176    96    96 58030020   1142   1152 000 3496 3 0
     3c (64) 00010000 2176   256   256 58030020   2094   2112 000 3752 3 0
     3c (64) 00010000 2176   256   256 58030020   1319   1328 000 4008 3 0
     3c (64) 00010000 2176    36    36 58030020    208    224 000 4264 3 0
     17 (16) (no args)
     18 (16) UNK=0
     0b (16) (no args)
```

FILES
> **/usr/local/bin/oakdecode**

SEE ALSO
> **foo2oak-wrapper**(1), **foo2oak**(1), **jbg2pbm**(1)

AUTHOR
> Rick Richardson <rick.richardson@comcast.net>
> http://foo2oak.rkkda.com/

NAME
>   foo2hp2600-wrapper – Convert Postscript into a ZJS printer stream

SYNOPSIS
>   **foo2hp2600-wrapper** [*options*] [*ps-file*]

DESCRIPTION
>   **foo2hp2600-wrapper** is a Foomatic compatible printer wrapper for the **foo2hp** printer driver. This script
>   reads a Postscript *ps-file* or standard input and converts it to Zenographics ZjStream printer format for driv-
>   ing the Hewlett-Packard 2600n color laser printer and other Zenographics-based printers.
>
>   This script can be used in a standalone fashion, but is intended to be called from a printer spooler system
>   which uses the Foomatic printer database.

COMMAND LINE OPTIONS

>   **Normal Options**
>   These are the options used to select the parameters of a print job that are usually controlled on a per job
>   basis.
>
>   **–b** *bits* Number of bits per plane. 1 or 2. [1].
>
>   **–c**   Print in color (else monochrome).
>
>   **–d** *duplex*
>   Duplex code to send to printer [1].
> | 1   off | 2   long edge | 3   short edge
>
>   **–m** *media*
>   Media code to send to printer [1].

Media	HPLJ 2600n
plain	1
preprinted	514
letterhead	513
transparency	2
prepunched	515
labels	265
bond	260
recycled	516
color	512
tough	276
envelope	267
light	258
heavy	262
cardstock	261
lightglossy	268
glossy	269
heavyglossy	270
cover	277
photo	278

>   **–p** *paper*
>   Paper size code to send to printer [1].

1	letter	9	A4
5	legal	11	A5
7	executive	13	B5jis

20	env #10	27	env DL
28	env C5	34	env B5
37	env Monarch		

−n *copies*

    Number of copies [1].

−r *xres***x***yres*

    Set device resolution in pixels/inch [1200x600].

−s *source*

    Source (Input Slot) code to send to printer [7].

1	tray 2	4	manual/tray 1
2	tray 3	7	auto

−t   Draft mode. Every other pixel is white.

−2 −3 −4 −5 −6 −8 −9 −10 −12 −14 −15 −16 −18

    Print in N-up. Requires the **psutils** package.

−o *orient*

    Orientation used for N-up.

Portrait	-op	(normal)
Landscape	-ol	(rotated 90 degrees anticlockwise)
Seascape	-os	(rotated 90 degrees clockwise)

Printer Tweaking Options

These are the options used to customize the operation of **foo2hp** for a particular printer.

−u *xoff* **x** *yoff*

    Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

−l *xoff* **x** *yoff*

    Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

−L *mask*

    Send the logical clipping values from -u/-l in the ZjStream. **foo2hp2600-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.

    0   don't send any logical clipping amounts
    1   only send Y clipping amount
    2   only send X clipping amount
    3   send both X and Y clipping amounts

−P   Do not send START_PLANE codes on monochrome output. May be needed by some monochrome-only printers, such as the HP LaserJet 1000.

−X *padlen*

    Add extra zero padding to the end of BID segments. The default is 16 bytes. Padding 16 bytes of zeroes is needed for older ZjStream printers, such as the Minolta 2200DL and HP LaserJet 1000, and seems harmless to newer ones, such as the Minolta 2300DL. So the default should be good for all cases.

Color Tweaking Options

These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

−g *gsopts*

Additional options to pass to Ghostscript, such as -g"-dDITHERPPI=nnn", etc. This option may appear more than once.

−G *profile.icm*

Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. If *profile.icm* is none.icm, then prepare for ordering a ICM custom printer profile (i.e. from www.ICCFactory.com).

−G *gamma-file.ps*

Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortransfer** Postscript operator. For example, the file might contain:
{0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer

−I *intent*

Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2hp** and its wrapper.

−S *plane*

Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.
1   Cyan
2   Magenta
3   Yellow
4   Black

−D *level*

Set Debug level [0].

EXAMPLES

Create a monochrome ZjStream from a Postscript document, examine it, and then print it using a RAW print queue:

        foo2hp2600-wrapper testpage.ps > testpage.zm
        zjsdecode < testpage.zm
        lpr -P raw testpage.zm

Create a color ZjStream stream from a Postscript document:

        foo2hp2600-wrapper -c testpage.ps > testpage.zc

FILES

/usr/local/bin/foo2hp2600-wrapper

SEE ALSO

foo2hp(1), **zjsdecode**(1)

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
http://foo2hp.rkkda.com/

NAME

       foo2hp – Convert Ghostscript pbmraw or bitcmyk format into a ZJS printer stream

SYNOPSIS

       foo2hp [*options*] *< pbmraw-file >zjs-file*

       foo2hp [*options*] *<bitcmyk-file >zjs-file*

       foo2hp [*options*] *<cups-file >zjs-file*

DESCRIPTION

       foo2hp converts Ghostscript pbmraw, bitcmyk, or cups output formats to monochrome or color ZJS streams, for driving the Hewlett-Packard 2600n color laser printer and other Zenographics-based printers.

COMMAND LINE OPTIONS

  Normal Options

      These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

      −b *bits* Bits per plane if autodetect doesn't work (1 or 2) [1].

      −c   Force color mode if autodetect doesn't work.

      −d *duplex*

            Duplex code to send to printer [1].
            │ 1   off │ 2   long edge │ 3   short edge

      −g *xpix**x**ypix*

            Set page dimensions in pixels [10200x6600].

      −m *media*

            Media code to send to printer [1].

Media	HPLJ 2600n
plain	1
preprinted	514
letterhead	513
transparency	2
prepunched	515
labels	265
bond	260
recycled	516
color	512
tough	276
envelope	267
light	258
heavy	262
cardstock	261
lightglossy	268
glossy	269
heavyglossy	270
cover	277
photo	278

      −p *paper*

            Paper code to send to printer [1].

1	letter	9	A4
5	legal	11	A5
7	executive	13	B5jis
20	env #10	27	env DL
28	env C5	34	env B5
37	env Monarch		

–n *copies*
> Number of copies [1].

–r *xres***x***yres*
> Set device resolution in pixels/inch [600x600].

–s *source*
> Source (InputSlot) code to send to printer [7].

1	tray 2	7	auto
2	tray 1		

–t Draft mode. Every other pixel is white.

–J *filename*
> Filename string to send to printer.

–U *username*
> Username string to send to printer.

Printer Tweaking Options
These are the options used to customize the operation of **foo2hp** for a particular printer.

–u *xoff* **x** *yoff*
> Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].

–l *xoff* **x** *yoff*
> Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].

–L *mask*
> Send logical clipping amounts implied by -u/-l in the ZjStream [3].
> | 0 | don't send any logical clipping amounts |
> |---|--|
> | 1 | only send Y clipping amount |
> | 2 | only send X clipping amount |
> | 3 | send both X and Y clipping amounts |

–P Do not send START_PLANE codes on monochrome output. May be needed by some black and white only printers, such as the HP LaserJet 1000.

–A AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmyk input only.

–B BlackClears: K=1 forces C,M,Y to 0. Works with bitcmyk input only.

–X *padlen*
> Add extra zero padding to the end of BID segments. The default is 16 bytes.

Debugging Options
These options are used for debugging **foo2hp**.

–S *plane*
> Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.
> | 1 | Cyan |
> |---|------|
> | 2 | Magenta |
> | 3 | Yellow |
> | 4 | Black |

−D *level*
        Set Debug level [0].

EXAMPLES
        Create a black and white ZJS stream:

                gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
                    -sPAPERSIZE=letter -r600x600 -sDEVICE=pbmraw
                    -sOutputFile=- - < testpage.ps
                | foo2hp -r600x600 -g5100x6600 -p1 >testpage.zm

        Create a color ZJS stream:

                gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
                    -sPAPERSIZE=letter -g5100x6600 -r600x600 -sDEVICE=bitcmyk
                    -sOutputFile=- - < testpage.ps
                | foo2hp -r600x600 -g5100x6600 -p1 >testpage.zc

FILES
        /usr/local/bin/foo2hp

SEE ALSO
        foo2hp2600-wrapper(1), **zjsdecode**(1)

AUTHOR
        Rick Richardson <rick.richardson@comcast.net>
        http://foo2hp.rkkda.com/

NAME
>   foo2xqx-wrapper – Convert Postscript into a XQX printer stream

SYNOPSIS
>   **foo2xqx-wrapper** [*options*] [*ps-file*]

DESCRIPTION
>   **foo2xqx-wrapper** is a Foomatic compatible printer wrapper for the **foo2xqx** printer driver. This script
>   reads a Postscript *ps-file* or standard input and converts it to XQX printer format for driving the HP LaserJet
>   M1005 MFP and other XQX-based printers.
>
>   This script can be used in a standalone fashion, but is intended to be called from a printer spooler system
>   which uses the Foomatic printer database.

COMMAND LINE OPTIONS

>   **Normal Options**
>   These are the options used to select the parameters of a print job that are usually controlled on a per job
>   basis.
>
>   **−d** *duplex*
>>   Duplex code to send to printer [1].
>> | 1   off | 2   long edge | 3   short edge
>
>   **−m** *media*
>>   Media code to send to printer [1].
>>
>> | Media | M1005 |
>> |--------------|-------|
>> | standard | 1 |
>> | transparency | 2 |
>> | envelope | 257 |
>> | letterhead | 259 |
>> | thick | 261 |
>> | postcard | 262 |
>> | labels | 263 |
>
>   **−p** *paper*
>>   Paper size code to send to printer [1].
>> | 1   letter | 9   A4 |
>> |------------------|-------------|
>> | 5   legal | 11   A5 |
>> | 7   executive | 13   B5 |
>> | 20   env #10 | 27   env DL |
>> | 28   env C5 | 34   env B5 |
>> | 37   env Monarch | |
>
>   **−n** *copies*
>>   Number of copies [1].
>
>   **−r** *xres***x***yres*
>>   Set device resolution in pixels/inch [1200x600].
>
>   **−s** *source*
>>   Source (Input Slot) code to send to printer [7].
>> | 1   upper | 4   manual |
>> | 2   lower | 7   auto |
>
>   **−t**   Draft mode. Every other pixel is white.

−2 −3 −4 −5 −6 −8 −9 −10 −12 −14 −15 −16 −18
> Print in N-up. Requires the **psutils** package.

−o *orient*
> Orientation used for N-up.
>
> | | | |
> |---|---|---|
> | Portrait | -op | (normal) |
> | Landscape | -ol | (rotated 90 degrees anticlockwise) |
> | Seascape | -os | (rotated 90 degrees clockwise) |

Printer Tweaking Options
These are the options used to customize the operation of **foo2xqx** for a particular printer.

−u *xoff* **x** *yoff*
> Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

−l *xoff* **x** *yoff*
> Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

−L *mask*
> Send the logical clipping values from -u/-l in the ZjStream. **foo2xqx-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.
> | | |
> |---|---|
> | 0 | don't send any logical clipping amounts |
> | 1 | only send Y clipping amount |
> | 2 | only send X clipping amount |
> | 3 | send both X and Y clipping amounts |

Debugging Options
These options are used for debugging **foo2xqx** and its wrapper.

−D *level*
> Set Debug level [0].

EXAMPLES
Create a monochrome ZjStream from a Postscript document, examine it, and then print it using a RAW print queue:

```
foo2xqx-wrapper testpage.ps > testpage.xqx
xqxdecode < testpage.xqx
lpr -P raw testpage.xqx
```

FILES
/usr/local/bin/foo2xqx-wrapper

SEE ALSO
foo2xqx(1), **xqxdecode**(1)

AUTHOR
Rick Richardson <rick.richardson@comcast.net>
http://foo2xqx.rkkda.com/

NAME

        foo2xqx – Convert Ghostscript pbmraw into a XQX printer stream

SYNOPSIS

        foo2xqx [*options*] <*pbmraw-file* >*xqx-file*

DESCRIPTION

        foo2xqx converts Ghostscript pbmraw to monochrome XQX streams, for driving the HP LaserJet M1005 MFP and other XQX-based printers.

COMMAND LINE OPTIONS

Normal Options

These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

−d *duplex*

        Duplex code to send to printer [1].

        │ 1   off │ 2   long edge │ 3   short edge

−g *xpix***x***ypix*

        Set page dimensions in pixels [10200x6600].

−m *media*

        Media code to send to printer [1].

Media	M1005
standard	1
transparency	2
envelope	257
letterhead	259
thick	261
postcard	262
labels	263

−p *paper*

        Paper code to send to printer [1].

1	letter	9	A4
5	legal	11	A5
7	executive	13	B5
20	env #10	27	env DL
28	env C5	34	env B5
37	env Monarch		

−n *copies*

        Number of copies [1].

−r *xres***x***yres*

        Set device resolution in pixels/inch [1200x600].

−s *source*

        Source (InputSlot) code to send to printer [7].

        │ 1   upper │ 4   manual

        │ 2   lower │ 7   auto

−t   Draft mode. Every other pixel is white.

−J *filename*

        Filename string to send to printer.

      −U *username*
          Username string to send to printer.

Printer Tweaking Options
These are the options used to customize the operation of **foo2xqx** for a particular printer.

      −u *xoff* **x** *yoff*
          Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].

      −l *xoff* **x** *yoff*
          Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].

      −L *mask*
          Send logical clipping amounts implied by -u/-l in the ZjStream [3].
          0   don't send any logical clipping amounts
          1   only send Y clipping amount
          2   only send X clipping amount
          3   send both X and Y clipping amounts

      −A   AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmyk input only.

      −B   BlackClears: K=1 forces C,M,Y to 0. Works with bitcmyk input only.

Debugging Options
These options are used for debugging **foo2xqx**.

      −S *plane*
          Output just a single color plane from a color print and print it on the black plane. The default is to
          output all color planes.
          1   Cyan
          2   Magenta
          3   Yellow
          4   Black

      −D *level*
          Set Debug level [0].

EXAMPLES
Create a black and white XQX stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
   -sPAPERSIZE=letter -r1200x600 -sDEVICE=pbmraw
   -sOutputFile=- - < testpage.ps
| foo2xqx -r1200x600 -g10200x6600 -p1 >testpage.zm
```

FILES
/usr/local/bin/foo2xqx

SEE ALSO
foo2xqx-wrapper(1), **xqxdecode**(1)

AUTHOR
Rick Richardson <rick.richardson@comcast.net>
http://foo2xqx.rkkda.com/

NAME

      xqxdecode – Decode a XQX stream into human readable form.

SYNOPSIS

      xqxdecode [*options*] <*xqx-file*

DESCRIPTION

      xqxdecode decodes a XQX stream into human readable form.

      An XQX stream is the printer langauge used by some HP LaserJet printers, such as the HP LaserJet M1005 (MFP).

COMMAND LINE OPTIONS

      These are the options that can appear on the command line.

      –d *basename*

            Basename of .pbm file for saving decompressed planes.

      –h   Print hex file offsets.

      –o   Print file offsets.

      –D *level*

            Set Debug level [0].

EXAMPLES

      Decode an XQX stream file created by foo2xqx.

```
$ xqxdecode -h < testpage.xm
     0: \033%-12345X@PJL JOB
    12: @PJL SET JAMRECOVERY=OFF
    2b: @PJL SET DENSITY=3
    3e: @PJL SET ECONOMODE=OFF
    55: @PJL SET RET=MEDIUM
    69: @PJL INFO STATUS
    7a: @PJL USTATUS DEVICE = ON
    93: @PJL USTATUS JOB = ON
    a9: @PJL USTATUS PAGE = ON
    c0: @PJL USTATUS TIMED = 30
   10c: @PJL SET JOBATTR="JobAttr4=20061118160242"
   10c: XQX_MAGIC, 0x5851582c (,XQX)
   110: XQX_START_DOC(1), 7 items
   118:        XQX_0x80000000, 84 (0x54)
   124:        XQX_0x10000005, 1 (0x1)
   130:        XQX_0x10000001, 0 (0x0)
   13c:        XQXI_DMDUPLEX, 0 (0x0)
   148:        XQX_0x10000000, 0 (0x0)
   154:        XQX_0x10000003, 1 (0x1)
   160:        XQXI_END, 3735928559 (0xdeadbeef)
   16c: XQX_START_PAGE(3), 15 items [Page 1]
   174:        XQX_0x80000000, 180 (0xb4)
   180:        XQX_0x20000005, 1 (0x1)
   18c:        XQXI_DMDEFAULTSOURCE, 7 (0x7)
   198:        XQXI_DMMEDIATYPE, 1 (0x1)
   1a4:        XQX_0x20000007, 1 (0x1)
   1b0:        XQXI_RESOLUTION_X, 600 (0x258)
```

```
        1bc:          XQXI_RESOLUTION_Y, 600 (0x258)
        1c8:          XQXI_RASTER_X, 9856 (0x2680)
        1d4:          XQXI_RASTER_Y, 6432 (0x1920)
        1e0:          XQXI_VIDEO_BPP, 2 (0x2)
        1ec:          XQXI_VIDEO_X, 4923 (0x133b)
        1f8:          XQXI_VIDEO_Y, 6432 (0x1920)
        204:          XQXI_ECONOMODE, 0 (0x0)
        210:          XQX_0x20000001, 1 (0x1)
        21c:          XQXI_END, 3735928559 (0xdeadbeef)
        228: XQX_START_PLANE(5), 4 items
        230:          XQX_0x80000000, 64 (0x40)
        23c:          XQX_0x40000000, 0 (0x0)
        248:          XQXI_BIH(0x40000002)
                      DL = 0, D = 0, P = 1, - = 0, XY = 9856 x 6432
                      L0 = 128, MX = 16, MY = 0
                      Order   = 3   ILEAVE SMID
                      Options = 92  LRLTWO TPDON TPBON DPON
                      51 stripes, 0 layers, 1 planes

        264:          XQXI_END, 3735928559 (0xdeadbeef)
        270: XQX_JBIG(7), 110 items
        2e6: XQX_END_PLANE(6), 0 items
        2ee: XQX_END_PAGE(4), 0 items
        2f6: XQX_END_DOC(2), 0 items
     Total size: 110 bytes
          0: \033%-12345X@PJL EOJ
         12: \033%-12345X
```

FILES

        /usr/local/bin/xqxdecode

SEE ALSO

        foo2xqx-wrapper(1), **foo2xqx**(1)

AUTHOR

        Rick Richardson <rick.richardson@comcast.net>
        http://foo2xqx.rkkda.com/

NAME

> foo2lava-wrapper – Convert Postscript into a LAVAFLOW or OPL printer stream

SYNOPSIS

> **foo2lava-wrapper** [*options*] [*ps-file*]

DESCRIPTION

> **foo2lava-wrapper** is a Foomatic compatible printer wrapper for the **foo2lava** printer driver. This script reads a Postscript *ps-file* or standard input and converts it to Zenographics LAVAFLOW printer format for driving the Konica Minolta magicolor 2530 DL network color laser printer, the Konica Minolta magicolor 2480/2490 MF AIO printer, and other Zenographics-based LAVAFLOW printers.
>
> This script can be used in a standalone fashion, but is intended to be called from a printer spooler system which uses the Foomatic printer database.

COMMAND LINE OPTIONS

> **Normal Options**
>
> > These are the options used to select the parameters of a print job that are usually controlled on a per job basis.
> >
> > **−c** Print in color (else monochrome).
> >
> > **−C** *colormode*
> > > Color correction mode [0].
> > > | | |
> > > |---|---|
> > > | 0 | Best compromise |
> > > | 1 | Photos (using m2300w CRDs) |
> > > | 2 | Photos and text (using m2300w CRDs) |
> > > | 3 | Graphics and text (using m2300w CRDs) |
> > > | 10 | ICM color profile (using -G *.icm file) |
> >
> > **−d** *duplex*
> > > Duplex code to send to printer [1].
> > > | 1 | off | 2 | long edge | 3 | short edge |
> > > |---|---|---|---|---|---|
> >
> > **−m** *media*
> > > Media code to send to printer [0].
> > >
> > > | Media | 2530DL |
> > > |---|---|
> > > | plain | 0 |
> > > | transparency | 4 |
> > > | thick stock | 20 |
> > > | envelope | 22 |
> > > | letterhead | 23 |
> > > | postcard | 25 |
> > > | labels | 26 |
> > > | recycled | 27 |
> >
> > **−p** *paper*
> > > Paper size code to send to printer [2].
> > >
> > > | 1 | executive | 25 | A5 |
> > > |---|---|---|---|
> > > | 2 | letter | 26 | A4 |
> > > | 3 | legal | 45 | B5jis |
> > > | 80 | env Monarch | 65 | B5iso |
> > > | 81 | env #10 | 90 | env DL |
> > > | 91 | env C5 | 92 | env B5 |
> > > | 835 | 4x6" photo | 837 | 10x15cm photo |

−n *copies*
>   Number of copies [1].

−r *xres***x***yres*
>   Set device resolution in pixels/inch [1200x600].

−s *source*
>   Source (Input Slot) code to send to printer [255].

| 1 | Tray 1 | 255 | auto |
| 4 | Tray 2 | | |

−t   Draft mode. Every other pixel is white.

−2 −3 −4 −5 −6 −8 −9 −10 −12 −14 −15 −16 −18
>   Print in N-up. Requires the **psutils** package.

−o *orient*
>   Orientation used for N-up.

Portrait	-op	(normal)
Landscape	-ol	(rotated 90 degrees anticlockwise)
Seascape	-os	(rotated 90 degrees clockwise)

Printer Tweaking Options

These are the options used to customize the operation of **foo2lava** for a particular printer.

−u *xoff* **x** *yoff*
>   Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

−l *xoff* **x** *yoff*
>   Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

−L *mask*
>   Send the logical clipping values from -u/-l in the LAVAFLOW stream. **foo2lava-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.

0	don't send any logical clipping amounts
1	only send Y clipping amount
2	only send X clipping amount
3	send both X and Y clipping amounts

−z *model*
>   Model: 0=2530DL (lavaflow) or 1=2480MF (opl). Default is 0.

Color Tweaking Options

These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

−g *gsopts*
>   Additional options to pass to Ghostscript, such as -g"-dDITHERPPI=nnn", etc. This option may appear more than once.

−G *profile.icm*
>   Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. (WORK IN PROGRESS).

−G *gamma-file.ps*

Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortrans-fer** Postscript operator. For example, the file might contain:

{0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer

−I *intent*

Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2lava** and its wrapper.

−S *plane*

Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

1   Cyan
2   Magenta
3   Yellow
4   Black

−D *level*

Set Debug level [0].

EXAMPLES

Create a monochrome LAVAFLOW stream from a Postscript document, examine it, and then print it using a RAW print queue:

        foo2lava-wrapper testpage.ps > testpage.zm
        lavadecode < testpage.zm
        lpr -P raw testpage.zm

Create a color LAVAFLOW stream from a Postscript document:

        foo2lava-wrapper -c testpage.ps > testpage.zc

FILES

/usr/local/bin/foo2lava-wrapper

SEE ALSO

foo2lava(1), **lavadecode**(1)

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
http://foo2zjs.rkkda.com/

NAME

      foo2lava – Convert Ghostscript pbmraw or bitcmyk format into a LAVAFLOW or a OPL printer stream

SYNOPSIS

      foo2lava [*options*] *< pbmraw-file >lava-file*

      foo2lava [*options*] *<bitcmyk-file >lava-file*

      foo2lava [*options*] *< pksmraw-file >lava-file*

DESCRIPTION

      foo2lava converts Ghostscript pbmraw, bitcmyk, or pksmraw output formats to monochrome or color LAVAFLOW or OPL streams, for driving the Konica Minolta magicolor 2530 DL network color laser printer, the Konica Minolta magicolor 2480/2480 MF AIO printer, and other Zenographics-based LAVAFLOW printers.

COMMAND LINE OPTIONS

  Normal Options

      These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

      −c   Force color mode if autodetect doesn't work.

      −d *duplex*

            Duplex code to send to printer [1].

1	off	2	long edge	3	short edge

      −g *xpix**x**ypix*

            Set page dimensions in pixels [10200x6600].

      −m *media*

            Media code to send to printer [0].

Media	2530DL
plain	0
transparency	4
thick stock	20
envelope	22
letterhead	23
postcard	25
labels	26
recycled	27

      −p *paper*

            Paper code to send to printer [2].

1	executive	25	A5
2	letter	26	A4
3	legal	45	B5jis
80	env Monarch	65	B5iso
81	env #10	90	env DL
91	env C5	92	env C6
835	4x6" photo	837	10x15cm photo

      −n *copies*

            Number of copies [1].

−r *xres**x**yres*
    Set device resolution in pixels/inch [1200x600].

−s *source*
    Source (InputSlot) code to send to printer [255].
    | 1   Tray 1 | 255   auto
    | 4   Tray 2 |

−t   Draft mode. Every other pixel is white.

−J *filename*
    Filename string to send to printer.

−U *username*
    Username string to send to printer.

Printer Tweaking Options
These are the options used to customize the operation of **foo2lava** for a particular printer.

−u *xoff**x**yoff*
    Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].

−l *xoff**x**yoff*
    Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].

−L *mask*
    Send logical clipping amounts implied by -u/-l in the LAVAFLOW stream [3].
    0   don't send any logical clipping amounts
    1   only send Y clipping amount
    2   only send X clipping amount
    3   send both X and Y clipping amounts

−A   AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmyk input only.

−B   BlackClears: K=1 forces C,M,Y to 0. Works with bitcmyk input only.

−z *model*
    Model: 0=2530DL (lavaflow) or 1=2480MF (opl). Default is 0.

Debugging Options
These options are used for debugging **foo2lava**.

−S *plane*
    Output just a single color plane from a color print and print it on the black plane. The default is to
    output all color planes.
    1   Cyan
    2   Magenta
    3   Yellow
    4   Black

−D *level*
    Set Debug level [0].

EXAMPLES
Create a black and white LAVAFLOW stream:

        gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
            -sPAPERSIZE=letter -r1200x600 -sDEVICE=pbmraw
            -sOutputFile=- - < testpage.ps
        | foo2lava -r1200x600 -g10200x6600 -p1 >testpage.zm

Create a color LAVAFLOW stream:

```
gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
   -sPAPERSIZE=letter -g10200x6600 -r1200x600 -sDEVICE=bitcmyk
   -sOutputFile=- - < testpage.ps
| foo2lava -r1200x600 -g10200x6600 -p1 >testpage.zc
```

FILES

       /usr/local/bin/foo2lava

SEE ALSO

       foo2lava-wrapper(1), **lavadecode**(1)

AUTHOR

       Rick Richardson <rick.richardson@comcast.com>
       http://foo2zjs.rkkda.com/

NAME
>   lavadecode – Decode a LAVAFLOW stream into human readable form.

SYNOPSIS
>   **lavadecode** [*options*] *<lavaflow-file*

DESCRIPTION
>   **lavadecode** decodes a LAVAFLOW stream into human readable form.
>
>   A LAVAFLOW stream is the printer langauge used by some Konica Minolta printers, such as the KM
>   magicolor 2530 DL.

COMMAND LINE OPTIONS
>   These are the options that can appear on the command line.
>
>   **–d** *basename*
>   Basename of .pbm file for saving decompressed planes.
>
>   **–h**   Print hex file offsets.
>
>   **–o**   Print file offsets.
>
>   **–D** *level*
>   Set Debug level [0].

EXAMPLES
>   Decode an LAVAFLOW stream file created by foo2lava.

```
$ lavadecode -h < testpage.prn
    0: \033%-12345X@PJL JOB NAME="stdin"
   1f: \033%-12345X@PJL JOB USERNAME=""
   3d: \033%-12345X@PJL JOB TIMESTAMP="07/20/2007"
   66: \033%-12345X@PJL JOB OSINFO="Linux/2.6.20-1.2316.fc5"
   99: \033%-12345X@PJL ENTER LANGUAGE=LAVAFLOW
   bf: \033E               RESET
   c1: \033&l0S            DUPLEX: [off]
   c6: \033&l0G
   cb: \033&u1200D         X RESOLUTION: [1200]
   d3: \033&l1X            COPIES: [1]
   d8: \033&x1X            TRANSMIT ONCE COPIES: [1]
   dd: \033&l0O            ORIENTATION: [port]
   e2: \033*r1U            NBIE: [1]
   e7: \033*g8W            BW/COLOR: [8]
                            fmt=2 np=1
                            BLACK:  X=1200, Y=600, unk=0, #=4(2)
   f4: \033*b1234M         COMPRESSION: [1234]
   fc: \033&l2A            PAGE SIZE: [letter]
  101: \033&l255H          PAPER SOURCE: [auto]
  108: \033&l0M            MEDIA TYPE: [plain]
  10d: \033&l0E            TOP MARGIN: [0]
  112: \033*r9792S         X RASTER: [9792,0x2640]
  11a: \033*r6400T         Y RASTER: [6400,0x1900]
  122: \033&l0U
  127: \033&l0Z
  12c: \033*p200X          X OFFSET: [200]
  133: \033*p200Y          Y OFFSET: [200]
```

```
    13a: \033*r1A               [Page 1]
    13f: \033*b20V              [black]
                                 DL = 0, D = 0, P = 1, - = 0, XY = 9792 x 6400
                                 L0 = 128, MX = 0, MY = 0
                                 Order   = 3   ILEAVE SMID
                                 Options = 92   LRLTWO TPDON TPBON DPON
                                 50 stripes, 0 layers, 1 planes
    159: \033*b65536V           JBIG data (first) [65536,0x10000]
                          ff 02 c2 79 54 3e be e1 a0 de 08 9a b1 d2 c2 59
                          ... ae 88 ef a7 c7 96 d3 96 a6 d7 2c 06 38 75 22 44
  10162: \033*b26432W           JBIG data (end) [26432,0x6740]
                          0e 89 66 ce 01 41 41 41 41 41 41 41 41 41 41 41
                          ... 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  168ab: \033*x3887138K         BLACK DOTS: [3887138]
  168b6: \033*x58781662W        BLACK WHITEDOTS: [58781662]
  168c2: \033*rC                END PAGE
  168c6: \033&l0H               PAPER SOURCE: [eject]
  168cb: \033E                  RESET
  168cd: \033%-12345X
```

FILES
> **/usr/local/bin/lavadecode**

SEE ALSO
> **foo2lava-wrapper**(1), **foo2lava**(1)

AUTHOR
> Rick Richardson <rick.richardson@comcast.net>
> http://foo2lava.rkkda.com/

NAME
>   foo2qpdl-wrapper – Convert Postscript into a QPDL printer stream

SYNOPSIS
>   **foo2qpdl-wrapper** [*options*] [*ps-file*]

DESCRIPTION
>   **foo2qpdl-wrapper** is a Foomatic compatible printer wrapper for the **foo2qpdl** printer driver. This script
>   reads a Postscript *ps-file* or standard input and converts it to Samsung/Xerox QPDL printer format for driv-
>   ing the Samsung CLP-300, CLP-600, CLX-3160 and Xerox Phaser 6110 QPDL printers.
>
>   This script can be used in a standalone fashion, but is intended to be called from a printer spooler system
>   which uses the Foomatic printer database.

COMMAND LINE OPTIONS

Normal Options
>   These are the options used to select the parameters of a print job that are usually controlled on a per job
>   basis.
>
>   **−c**   Print in color (else monochrome).
>
>   **−d** *duplex*
>   Duplex code to send to printer [1].
> | 1   off | 2   long edge | 3   short edge
>
>   **−m** *media*
>   Media code to send to printer [0].

Media	QPDL
plain	0
thick	1
thin	2
bond	3
color	4
card	5
labels	6
envelope	7
preprinted	8
cotton	9
recycled	10
transparency	11
archive	12

>   **−p** *paper*
>   Paper size code to send to printer [0].

0	letter	1	legal
2	A4	3	executive
6	env #10	7	env Monarch
8	env C5	9	env DL
11	B5jis	12	B5iso
16	A5	17	A6
23	env C6	24	folio
25	env 6.75	26	env #9
28	oficio		

−n *copies*
>   Number of copies [1].

−r *xres***x***yres*
>   Set device resolution in pixels/inch [1200x600].

−s *source*
>   Source (Input Slot) code to send to printer [255].
>
> | 1 | auto | 2 | manual |
> |---|-------|---|--------|
> | 3 | multi | 4 | tray1 |

−t   Draft mode. Every other pixel is white.

−2 −3 −4 −5 −6 −8 −9 −10 −12 −14 −15 −16 −18
>   Print in N-up. Requires the **psutils** package.

−o *orient*
>   Orientation used for N-up.
>
> | Portrait | -op | (normal) |
> |-----------|-----|-----------------------------------|
> | Landscape | -ol | (rotated 90 degrees anticlockwise)|
> | Seascape | -os | (rotated 90 degrees clockwise) |

Printer Tweaking Options

These are the options used to customize the operation of **foo2qpdl** for a particular printer.

−u *xoff* **x** *yoff*
>   Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size].

−l *xoff* **x** *yoff*
>   Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size].

−L *mask*
>   Send the logical clipping values from -u/-l in the QPDL stream. **foo2qpdl-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.
>
> | 0 | don't send any logical clipping amounts |
> |---|--|
> | 1 | only send Y clipping amount |
> | 2 | only send X clipping amount |
> | 3 | send both X and Y clipping amounts |

Color Tweaking Options

These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

−g *gsopts*
>   Additional options to pass to Ghostscript, such as -g"-dDITHERPPI=nnn", etc. This option may appear more than once.

−G *profile.icm*
>   Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. (WORK IN PROGRESS).

−G *gamma-file.ps*
>   Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortransfer** Postscript operator. For example, the file might contain:
>   {0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer

–I *intent*

Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2qpdl** and its wrapper.

–S *plane*

Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.
1   Cyan
2   Magenta
3   Yellow
4   Black

–D *level*

Set Debug level [0].

EXAMPLES

Create a monochrome QPDL stream from a Postscript document, examine it, and then print it using a RAW print queue:

    foo2qpdl-wrapper testpage.ps > testpage.zm
    qpdldecode < testpage.zm
    lpr -P raw testpage.zm

Create a color QPDL stream from a Postscript document:

    foo2qpdl-wrapper -c testpage.ps > testpage.zc

FILES

/usr/local/bin/foo2qpdl-wrapper

SEE ALSO

foo2qpdl(1), **qpdldecode**(1)

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
http://foo2qpdl.rkkda.com/

NAME

      foo2qpdl – Convert Ghostscript pbmraw or bitcmyk format into a QPDL printer stream

SYNOPSIS

      foo2qpdl [*options*] *< pbmraw-file > qpdl-file*

      foo2qpdl [*options*] *< bitcmyk-file > qpdl-file*

      foo2qpdl [*options*] *< pksmraw-file > qpdl-file*

DESCRIPTION

      foo2qpdl converts Ghostscript pbmraw, bitcmyk, or pksmraw output formats to monochrome or color QPDL streams, for driving the Samsung CLP-300, CLP-600, CLX-3160 and the Xerox Phaser 6110 QPDL printers.

COMMAND LINE OPTIONS

  Normal Options

      These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

      −c   Force color mode if autodetect doesn't work.

      −d *duplex*

          Duplex code to send to printer [1].

1	off	2	long edge	3	short edge

      −g *xpix**x**ypix*

          Set page dimensions in pixels [10200x6600].

      −m *media*

          Media code to send to printer [0].

Media	QPDL
plain	0
thick	1
thin	2
bond	3
color	4
card	5
labels	6
envelope	7
preprinted	8
cotton	9
recycled	10
transparency	11
archive	12

      −p *paper*

          Paper code to send to printer [0].

0	letter	1	legal
2	A4	3	executive
6	env #10	7	env Monarch
8	env C5	9	env DL
11	B5jis	12	B5iso
16	A5	17	A6

23	env C6	24	folio
25	env 6.75	26	env #9
28	oficio		

−n *copies*

Number of copies [1].

−r *xres***x***yres*

Set device resolution in pixels/inch [1200x600].

−s *source*

Source (InputSlot) code to send to printer [255].

1	auto	2	manual
3	multi	4	tray1

−t   Draft mode. Every other pixel is white.

−J *filename*

Filename string to send to printer.

−U *username*

Username string to send to printer.

Printer Tweaking Options

These are the options used to customize the operation of **foo2qpdl** for a particular printer.

−u *xoff* **x***yoff*

Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].

−l *xoff* **x***yoff*

Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].

−L *mask*

Send logical clipping amounts implied by -u/-l in the QPDL stream [3].

0   don't send any logical clipping amounts
1   only send Y clipping amount
2   only send X clipping amount
3   send both X and Y clipping amounts

−A   AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmyk input only.

−B   BlackClears: K=1 forces C,M,Y to 0. Works with bitcmyk input only.

Debugging Options

These options are used for debugging **foo2qpdl**.

−S *plane*

Output just a single color plane from a color print and print it on the black plane. The default is to
output all color planes.

1   Cyan
2   Magenta
3   Yellow
4   Black

−D *level*

Set Debug level [0].

EXAMPLES

Create a black and white QPDL stream:

        gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
          -sPAPERSIZE=letter -r1200x600 -sDEVICE=pbmraw
          -sOutputFile=- - < testpage.ps

```
             | foo2qpdl -r1200x600 -g10200x6600 -p0 >testpage.zm
```

Create a color QPDL stream:

```
          gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
            -sPAPERSIZE=letter -g10200x6600 -r1200x600 -sDEVICE=bitcmyk
            -sOutputFile=- - < testpage.ps
          | foo2qpdl -r1200x600 -g10200x6600 -p0 >testpage.zc
```


FILES
      /usr/local/bin/foo2qpdl

SEE ALSO
      foo2qpdl-wrapper(1), **qpdldecode**(1)

AUTHOR
      Rick Richardson <rick.richardson@comcast.com>
      http://foo2qpdl.rkkda.com/

NAME

qpldecode – Decode a QPDL stream into human readable form.

SYNOPSIS

qpldecode [*options*] *<qpdl-file*

DESCRIPTION

qpldecode decodes a QPDL stream into human readable form. Only the JBIG compression format (0x13) is handled.

An QPDL stream is the printer langauge used by the Samsung CLP-300, CLP-600, CLX-3160 and the Xerox Phaser 6110 printers.

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

–d *basename*

Basename of .pbm file for saving decompressed planes.

–h   Print hex file offsets.

–o   Print file offsets.

–D *level*

Set Debug level [0].

EXAMPLES

Decode an QPDL stream file created by foo2qpdl.

```
 0:      33%-12345X@PJL DEFAULT SERVICEDATE=20070212
2c:    @PJL SET USERNAME="Unknown"
49:    @PJL SET JOBNAME="testpage.pdf"
6a:    @PJL SET COLORMODE=COLOR
84:    @PJL SET PAPERTYPE = NORMAL
a1:    @PJL ENTER LANGUAGE = QPDL
bd:    RECTYPE 0x0  len=17
           res=600, copies=1, papersize=letter(0), w=2550, h=3300
           papersource=auto, unk=0, duplex=0:0, unk=0,2,  unk=268(0x10c)
ce:    RECTYPE 0xc  len=68(0x44)
           stripe=0, WB=1248(0x4e0), H=128(0x80), plane=4, comp=0x13,
           len=56(0x38)
           magic=0x39abcdef, len=20(0x14), unk=0,0,0,0,0,0,
           checksum=0x356
           DL = 0, D = 0, P = 1, - = 0, XY = 9984 x 6400
           L0 = 6400, MX = 0, MY = 0
           Order  = 0
           Options = 72  LRLTWO TPBON
           1 stripes, 0 layers, 1 planes
112:    RECTYPE 0xc  len=68(0x44)
           stripe=0, WB=1248(0x4e0), H=128(0x80), plane=1, comp=0x13,
           len=56(0x38)
           magic=0x39abcdef, len=20(0x14), unk=0,0,0,0,0,0,
           checksum=0x356
           DL = 0, D = 0, P = 1, - = 0, XY = 9984 x 6400
           L0 = 6400, MX = 0, MY = 0
           Order  = 0
```

```
                           Options = 72   LRLTWO TPBON
                           1 stripes, 0 layers, 1 planes
         156:     RECTYPE 0xc   len=68(0x44)
                           stripe=0, WB=1248(0x4e0), H=128(0x80), plane=2, comp=0x13,
                           len=56(0x38)
                           magic=0x39abcdef, len=20(0x14), unk=0,0,0,0,0,0,
                           checksum=0x356
                           DL = 0, D = 0, P = 1, - = 0, XY = 9984 x 6400
                           L0 = 6400, MX = 0, MY = 0
                           Order   = 0
                           Options = 72   LRLTWO TPBON
                           1 stripes, 0 layers, 1 planes
         19a:     RECTYPE 0xc   len=68(0x44)
                           stripe=0, WB=1248(0x4e0), H=128(0x80), plane=3, comp=0x13,
                           len=56(0x38)
                           magic=0x39abcdef, len=20(0x14), unk=0,0,0,0,0,0,
                           checksum=0x356
                           DL = 0, D = 0, P = 1, - = 0, XY = 9984 x 6400
                           L0 = 6400, MX = 0, MY = 0
                           Order   = 0
                           Options = 72   LRLTWO TPBON
                           1 stripes, 0 layers, 1 planes
         1de:     RECTYPE 0xc   len=77488(0x12eb0)
                           stripe=1, WB=1248(0x4e0), H=128(0x80), plane=1, comp=0x13,
                           len=77476(0x12ea4)
                           magic=0x39abcdef, len=77440(0x12e80), unk=2000000,0,0,0,0,0,
                           checksum=0x9326d7
       1308e:     RECTYPE 0xc   len=77680(0x12f70)
                           stripe=1, WB=1248(0x4e0), H=128(0x80), plane=2, comp=0x13,
                           len=77668(0x12f64)
                           magic=0x39abcdef, len=77632(0x12f40), unk=2000000,0,0,0,0,0,
                           checksum=0x9367e5
       25ffe:     RECTYPE 0xc   len=69232(0x10e70)
                           stripe=1, WB=1248(0x4e0), H=128(0x80), plane=3, comp=0x13,
                           len=69220(0x10e64)
                           magic=0x39abcdef, len=69184(0x10e40), unk=2000000,0,0,0,0,0,
                           checksum=0x83938a
       36e6e:     RECTYPE 0xc   len=45616(0xb230)
                           stripe=1, WB=1248(0x4e0), H=128(0x80), plane=4, comp=0x13,
                           len=45604(0xb224)
                           magic=0x39abcdef, len=45568(0xb200), unk=2000000,0,0,0,0,0,
                           checksum=0x58015d
       4209e:     RECTYPE 0x1   len=3
                           copies=1
       420a1:     RECTYPE 0x9   len=0
       420a2:      33%-12345X
```

FILES

       /usr/local/bin/qpdldecode

SEE ALSO

      foo2qpdl-wrapper(1), **foo2qpdl**(1)

AUTHOR
> Rick Richardson <rick.richardson@comcast.net>
> http://foo2qpdl.rkkda.com/

NAME
>   foo2slx-wrapper – Convert Postscript into a SLX printer stream

SYNOPSIS
>   **foo2slx-wrapper** [*options*] [*ps-file*]

DESCRIPTION
>   **foo2slx-wrapper** is a Foomatic compatible printer wrapper for the **foo2slx** printer driver. This script reads
>   a Postscript *ps-file* or standard input and converts it to Software Imaging K.K. SLX printer format for driv-
>   ing the Lexmark C500 network color laser printer and other SLX-based printers.
>
>   This script can be used in a standalone fashion, but is intended to be called from a printer spooler system
>   which uses the Foomatic printer database.

COMMAND LINE OPTIONS

>   **Normal Options**
>   These are the options used to select the parameters of a print job that are usually controlled on a per job
>   basis.

>   **−c**   Print in color (else monochrome).

>   **−m** *media*
>   Media code to send to printer [0].

Media	SLX
plain	0
transparency	1
labels	2
thick1	3
envelope1	4
thin	5
thick2	6
envelope2	7
middle	8
special	9

>   **−p** *paper*
>   Paper size code to send to printer [6].

6	letter	2	A4
9	legal	4	B5
8	executive	5	B5iso
10	env #10	11	env DL

>   **−n** *copies*
>   Number of copies [1].

>   **−r** *xres***x***yres*
>   Set device resolution in pixels/inch [1200x600].

>   **−s** *source*
>   Source (Input Slot) code to send to printer [0].

0	auto	1	cassette1

>   **−2 −3 −4 −5 −6 −8 −9 −10 −12 −14 −15 −16 −18**
>   Print in N-up. Requires the **psutils** package.

>   **−o** *orient*
>   Orientation used for N-up.

Portrait	-op	(normal)
Landscape	-ol	(rotated 90 degrees anticlockwise)
Seascape	-os	(rotated 90 degrees clockwise)

Printer Tweaking Options

These are the options used to customize the operation of **foo2slx** for a particular printer.

−u *xoff* **x** *yoff*

Set the offset of the start of the printable region from the upper left corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

−l *xoff* **x** *yoff*

Set the offset of the end of the printable region from the lower right corner, in pixels [varies with paper size]. The defaults should work on the 2200DL and 2300DL, and have not been tested on any other printers.

−L *mask*

Send the logical clipping values from -u/-l in the ZjStream. **foo2slx-wrapper** always runs Ghostscript with the ideal page dimensions, so that the scale of the image is correct, regardless whether or not the printer has unprintable regions. This option is used to move the position of the clipped image back to where it belongs on the page. The default is to send the amount which was clipped by -u and -l, and should be good in most cases.

0   don't send any logical clipping amounts
1   only send Y clipping amount
2   only send X clipping amount
3   send both X and Y clipping amounts

Color Tweaking Options

These are the options used to control the quality of color output. Color correction is currently a WORK IN PROGRESS.

−g *gsopts*

Additional options to pass to Ghostscript, such as -g"-dDITHERPPI=nnn", etc. This option may appear more than once.

−G *profile.icm*

Convert *profile.icm* to a Postscript color rendering dictionary (CRD) using **foo2zjs-icc2ps** and adjust the printer colors by using the Postscript **setcolorrendering** operator. (WORK IN PROGRESS).

−G *gamma-file.ps*

Prepend *gamma-file.ps* to the Postscript input to perform color correction using the **setcolortrans-fer** Postscript operator. For example, the file might contain:
{0.333 exp} {0.333 exp} {0.333 exp} {0.333 exp} setcolortransfer

−I *intent*

Select profile intent from the ICM file. 0=Perceptual, 1=Colorimetric, 2=Saturation, 3=Absolute. Default is 0 (perceptual).

Debugging Options

These options are used for debugging **foo2slx** and its wrapper.

−S *plane*

Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.

1   Cyan
2   Magenta
3   Yellow
4   Black

−D *level*
> Set Debug level [0].

EXAMPLES
> Create a monochrome ZjStream from a Postscript document, examine it, and then print it using a RAW
> print queue:
>
>> foo2slx-wrapper testpage.ps > testpage.zm
>> slxdecode < testpage.zm
>> lpr -P raw testpage.zm
>
> Create a color ZjStream stream from a Postscript document:
>
>> foo2slx-wrapper -c testpage.ps > testpage.zc

FILES
> **/usr/local/bin/foo2slx-wrapper**

SEE ALSO
> **foo2slx**(1), **slxdecode**(1)

AUTHOR
> Rick Richardson <rick.richardson@comcast.net>
> http://foo2slx.rkkda.com/

NAME

      foo2slx – Convert Ghostscript pbmraw or bitcmyk format into a SLX printer stream

SYNOPSIS

      foo2slx [*options*] *< pbmraw-file >slx-file*

      foo2slx [*options*] *<bitcmyk-file >slx-file*

      foo2slx [*options*] *< pksmraw-file >slx-file*

DESCRIPTION

      foo2slx converts Ghostscript pbmraw, bitcmyk, or pksmraw output formats to monochrome or color SLX streams, for driving the Lexmark C500 network color laser printer and other SLZ-based printers. The SLX stream is a variant of ZjStream produced by Software Imaging K.K.

COMMAND LINE OPTIONS

  Normal Options

      These are the options used to select the parameters of a print job that are usually controlled on a per job basis.

      −c   Force color mode if autodetect doesn't work.

      −g *xpix***x***ypix*

            Set page dimensions in pixels [10200x6600].

      −m *media*

            Media code to send to printer [0].

Media	SLX
plain	0
transparency	1
labels	2
thick1	3
envelope1	4
thin	5
thick2	6
envelope2	7
middle	8
special	9

      −p *paper*

            Paper code to send to printer [6].

6	letter	2	A4
9	legal	4	B5
8	executive	5	B5iso
10	env #10	11	env DL

      −n *copies*

            Number of copies [1].

      −r *xres***x***yres*

            Set device resolution in pixels/inch [1200x600].

      −s *source*

            Source (InputSlot) code to send to printer [0].

0	auto	1	cassette1

Printer Tweaking Options

These are the options used to customize the operation of **foo2slx** for a particular printer.

−u *xoff* **x** *yoff*

Set the offset of the start of the printable region from the upper left corner, in pixels [0x0].

−l *xoff* **x** *yoff*

Set the offset of the end of the printable region from the lower right corner, in pixels [0x0].

−L *mask*

Send logical clipping amounts implied by -u/-l in the ZjStream [3].
0   don't send any logical clipping amounts
1   only send Y clipping amount
2   only send X clipping amount
3   send both X and Y clipping amounts

−A   AllIsBlack: convert C=1,M=1,Y=1 to just K=1. Works with bitcmyk input only.

−B   BlackClears: K=1 forces C,M,Y to 0. Works with bitcmyk input only.

Debugging Options

These options are used for debugging **foo2slx**.

−S *plane*

Output just a single color plane from a color print and print it on the black plane. The default is to output all color planes.
1   Cyan
2   Magenta
3   Yellow
4   Black

−D *level*

Set Debug level [0].

EXAMPLES

Create a black and white SLX stream:

        gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
          -sPAPERSIZE=letter -r1200x600 -sDEVICE=pbmraw
          -sOutputFile=- - < testpage.ps
        | foo2slx -r1200x600 -g10200x6600 -p1 >testpage.zm

Create a color SLX stream:

        gs -q -dBATCH -dSAFER -dQUIET -dNOPAUSE
          -sPAPERSIZE=letter -g10200x6600 -r1200x600 -sDEVICE=bitcmyk
          -sOutputFile=- - < testpage.ps
        | foo2slx -r1200x600 -g10200x6600 -p1 >testpage.zc

FILES

/usr/local/bin/foo2slx

SEE ALSO

foo2slx-wrapper(1), **slxdecode**(1)

AUTHOR

Rick Richardson <rick.richardson@comcast.net>
http://foo2slx.rkkda.com/

NAME

slxdecode – Decode a SLX stream into human readable form.

SYNOPSIS

slxdecode [*options*] <*slx-file*

DESCRIPTION

slxdecode decodes a SLX stream into human readable form.

A SLX stream is the printer langauge used by some Lexmark printers, such as the C500.

More information on the Software Imaging K.K. SLX stream can be found at:

http://softwareimaging.com/products-services/sorcerer/index.asp

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

–d *basename*

Basename of .pbm file for saving decompressed planes.

–r *basename*

Basename of .jbg file for saving raw planes

–h Print hex file offsets.

–o Print file offsets.

–D *level*

Set Debug level [0].

EXAMPLES

Decode an SLX file created by foo2slx.

```
$ slxdecode < testpage.zm
SLX_MAGIC, 0x584c53a5 (SLX)
SLT_START_DOC, 12 items
        SLI_PAGECOUNT, 4294967295 (0xffffffff)
        SLI_DMDUPLEX, 0 (0x0)
        SLI_DMCOLLATE, 0 (0x0)
        SLI_0x3, 0 (0x0)
        SLI_DISPLAY, 0 (0x0)
        SLI_0x5, 0 (0x0)
        SLI_0x6, 0 (0x0)
        SLI_0x7, 1 (0x1)
        SLI_0x8, 0 (0x0)
        SLI_0x9, 0 (0x0)
        SLI_COUNT, 1 (0x1)
        SLI_DMCOLLATE, 0 (0x0)
SLT_START_PAGE, 16 items [Page 1]
        SLI_DMPAPER, 6 (0x6)
        SLI_CUSTOM_X, 0 (0x0)
        SLI_CUSTOM_Y, 0 (0x0)
        SLI_DMCOPIES, 1 (0x1)
        SLI_DMDEFAULTSOURCE, 0 (0x0)
        SLI_DMMEDIATYPE, 0 (0x0)
        SLI_NBIE, 0 (0x0)
        SLI_RESOLUTION_X, 600 (0x258)
```

```
             SLI_RESOLUTION_Y, 600 (0x258)
             SLI_OFFSET_X, 102 (0x66)
             SLI_OFFSET_Y, 102 (0x66)
             SLI_RASTER_X, 4896 (0x1320)
             SLI_RASTER_Y, 6392 (0x18f8)
             SLI_0x10d, 4896 (0x1320)
             SLI_0x10e, 6392 (0x18f8)
             SLI_0x10f, 1 (0x1)
     SLT_JBIG_BIH, 0 items
             Data: 20 bytes
                   DL = 0, D = 0, P = 1, - = 0, XY = 4896 x 6392
                   L0 = 128, MX = 0, MY = 0
                   Order   = 0
                   Options = 8  TPBON
                   50 stripes, 0 layers, 1 planes
     SLT_JBIG_BID, 0 items
             Data: 116 bytes
     SLT_END_JBIG, 0 items
     SLT_END_PAGE, 0 items
     SLT_END_DOC, 0 items
```

FILES

> **/usr/local/bin/slxdecode**

SEE ALSO

> **foo2slx-wrapper**(1), **foo2slx**(1), **jbg2pbm**(1)

AUTHOR

> Rick Richardson <rick.richardson@comcast.net>
> http://foo2slx.rkkda.com/

NAME

rodecode – Decode a Raster Object (ro) stream into human readable form.

SYNOPSIS

rodecode [*options*] <*zjs-file*

DESCRIPTION

rodecode decodes a Raster Object (ro) stream into human readable form.

A Raster Object stream is the printer langauge used by some Konica Minolta printers, such as the KM magicolor 2480 MF.

COMMAND LINE OPTIONS

These are the options that can appear on the command line.

–d *basename*

Basename of .pbm file for saving decompressed planes.

–h   Print hex file offsets.

–o   Print file offsets.

–D *level*

Set Debug level [0].

EXAMPLES

Decode an Raster Object stream file created by foo2ro.

```
$ rodecode -h < testpage.prn
     0:      Event=StartOfJob;
    11:      OSVersion=WindowsXP;
    25:      DrvVersion=2.0.1410.0;
    3b:      Resolution=1200x600;
    4f:      RasterObject.Compression=JBIG;
    6d:      Sides=OneSided;
    7c:      MediaSize=custom_size_8.5x11in;
    9b:      MediaType=plain;
    ab:      MediaInputTrayCheck=top;
    c3:      RasterObject.BitsPerPixel=1;
    df:      RasterObject.Planes=00FFFF,0,0,0,0,0,0;
   106:      RasterObject.Width=9792;
   11e:      RasterObject.Height=6400;
   137:      RasterObject.Data#20=

                      DL = 0, D = 0, P = 1, - = 0, XY = 9792 x 6400
                      L0 = 128, MX = 0, MY = 0
                      Order   = 3  ILEAVE SMID
                      Options = 92  LRLTWO TPDON TPBON DPON
                      50 stripes, 0 layers, 1 planes
   161:      RasterObject.Data#32768=
   817a:     RasterObject.Data#32768=
  10193:     RasterObject.Data#3168=
  10e0b:     RasterObject.Planes=FF00FF,0,0,0,0,0,0;
  10e32:     RasterObject.Width=9792;
  10e4a:     RasterObject.Height=6400;
  10e63:     RasterObject.Data#20=
```

```
                                     DL = 0, D = 0, P = 1, - = 0, XY = 9792 x 6400
                                     L0 = 128, MX = 0, MY = 0
                                     Order  = 3  ILEAVE SMID
                                     Options = 92  LRLTWO TPDON TPBON DPON
                                     50 stripes, 0 layers, 1 planes
     10e8d:     RasterObject.Data#32768=
     18ea6:     RasterObject.Data#32768=
     20ebf:     RasterObject.Data#19200=
     259d8:     RasterObject.Planes=FFFF00,0,0,0,0,0,0;
     259ff:     RasterObject.Width=9792;
     25a17:     RasterObject.Height=6400;
     25a30:     RasterObject.Data#20=

                                     DL = 0, D = 0, P = 1, - = 0, XY = 9792 x 6400
                                     L0 = 128, MX = 0, MY = 0
                                     Order  = 3  ILEAVE SMID
                                     Options = 92  LRLTWO TPDON TPBON DPON
                                     50 stripes, 0 layers, 1 planes
     25a5a:     RasterObject.Data#32768=
     2da73:     RasterObject.Data#32768=
     35a8c:     RasterObject.Data#32768=
     3daa5:     RasterObject.Data#7056=
     3f64d:     RasterObject.Planes=000000,0,0,0,0,0,0;
     3f674:     RasterObject.Width=9792;
     3f68c:     RasterObject.Height=6400;
     3f6a5:     RasterObject.Data#20=

                                     DL = 0, D = 0, P = 1, - = 0, XY = 9792 x 6400
                                     L0 = 128, MX = 0, MY = 0
                                     Order  = 3  ILEAVE SMID
                                     Options = 92  LRLTWO TPDON TPBON DPON
                                     50 stripes, 0 layers, 1 planes
     3f6cf:     RasterObject.Data#32768=
     476e8:     RasterObject.Data#17472=
     4bb41:     Event=EndOfPage;
     4bb51:     Event=EndOfJob;
```

FILES

>**/usr/local/bin/rodecode**

SEE ALSO

>**foo2ro-wrapper**(1), **foo2ro**(1)

AUTHOR

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>${URLRO}/