NAME

a2ping.pl —— convert between PS, EPS and PDF and other page description formats

SYNOPSIS

a2ping.pl [——]**help**
a2ping.pl [——]**doc**
a2ping.pl [*options*] *<inputfile>* [[*outformat*:] *outputfile*]

DESCRIPTION

a2ping is a UNIX command line utility written in Perl that converts many raster image and vector graphics formats to EPS or PDF and other page description formats. Accepted input file formats are: PS (PostScript), EPS, PDF, PNG, JPEG, TIFF, PNM, BMP, GIF, LBM, XPM, PCX, TGA. Accepted output formats are: EPS, PCL5, PDF, PDF1, PBM, PGM, PPM, PS, markedEPS, markedPS, PNG, XWD, BMP, TIFF, JPEG, GIF, XPM. **a2ping** delegates the low-level work to Ghostscript (GS), **pdftops** and **sam2p**. **a2ping** fixes many glitches during the EPS to EPS conversion, so its output is often more compatible and better embeddable than its input.

Without the `--below` option, it is guarenteed to start at the 0,0 coordinate. `--below`, `--hires` and `-v` are recommended options.

The page size is set exactly corresponding to the BoundingBox. This means that when Ghostscript renders it, the result needs no cropping, and the PDF MediaBox is correct.

If the bounding box is not right, of course, you have problems. If you feed crap in, you get crap. But you can supply the ——**bboxfrom=compute-gs** option to make GS recompute the bounding box.

The name of the input file doesn't matter — **a2ping** detects the file format based on the first few bytes of the file. The name of the output file matters if *outformat* is missing from the command line: then the extension of the output file determines the FileFormat (*outformat*).

EXTERNAL PROGRAMS

The internal file format of **a2ping.pl** is PS/EPS. Everything read is first converted to PS or EPS, then processed by **a2ping.pl**, then converted to the output format.

To analyse the bounding box and other properties of non-EPS PS files (and EPS files with option ——**bboxfrom** other than **=guess**), GS is used. Converting PS to EPS involves this analysis.

To write PDF files, GS is used.

To read PDF files, **pdftops** from the **xpdf** package is used.

Sampled input formats are PNG, JPEG, TIFF, PNM, BMP, GIF, LBM, XPM, PCX and TGA. To read sampled input formats, **sam2p** is used. **sam2p** is a raster image converter written in C++ by the author of **a2ping.pl**.

Extra output formats are PNG, XWD, BMP, TIFF, JPEG, GIF and XPM. To write extra output formats, **sam2p** and GS are used.

PNM output formats are PGM, PGM and PPM. To write PNM output formats, GS is used.

TIPS AND TRICKS

• Call with the **-v** option to see progress and debug messages.

• If your EPS contains a wrong bounding box, you can fix it by running `a2ping.pl -v --bboxfrom=compute-gs thefile.eps --`

- You can specify − as *inputfile* to get stdin and as *outputfile* to get stdout. This works even for PDF files (which must be seekable), because **a2ping** copies them to a temporary file automatically.

- If *inputfile* and *outputfile* are the same, **a2ping** copies the *inputfile* to a temporary location first. However, this usage is recommended only if there is a backup of the file to be restored in case **a2ping** doesn't produce the desired result.

- If you specify −− as *outputfile*, it will be the same as *inputfile*.

- **a2ping** respects −−**Duplex** for FileFormat PCL5, even though GS doesn't.

- If you have an incompatible PS that GS can read but your printer cannot print, just run `a2ping.pl foo.ps PDF: - | a2ping.pl - PS: foo.ps`

- If you have a PS coming from Win32 (often with extension `.prn`), run it through **a2ping**. It will remove the resolution changes and the progress text printed to the terminal (which confuses *gv*(1) and makes some filters in the print queue emit incorrect output).

- **a2ping** does antialiasing (−−**antialias=scale3no**) of glyphs and curves when emitting a sampled image (FileFormats such as PGM and PPM). This improves readability of the glyphs. **=yes** instructs GS to do internal antialiasing, but it usually doesn't improve much. **=scale3no** turns off GS internal antialiasing, but makes it render everything 3x3 as big, and then scales it back down. **=scale3no** turns on both 3x3 scaling and GS internal antialiasing, which results in thicker lines and worse quality in general.

- When creating a PBM file, antialiasing usually doesn't improve the quality, so it is switched off by default. But if you set −−**antialias=scale3no** or −−**antialias=scale3yes**, GS will render a PGM file, and the value of −−**threshold** determines the minimum intensity for white in the final PBM.

- If you need a bigger sampled output file, specify a larger −−**Resolution**. The default is −−**Resolution=72**. If your sampled output file is going to be really big, you should specify −−**AntiAlias=yes** instead of the default −−**AntiAlias=scale3no** to speed up conversion.

MISC

- Doesn't depend on the filename or extension of the input file.

- Conversion from EPS to PDF: fixes glitches etc., calls gs −sDEVICE=pdfwrite

- Conversion from EPS to EPS: fixes various glitches, moves (llx,lly) to (0,0), removes binary junk from the beginning of the EPS etc.

- Conversion from PDF to PDF: keeps the file intact

- Conversion from PDF to EPS: calls pdftops −eps (of the xpdf package)

- Conversion from PS to EPS: keeps 1st page only, removes setpagedevice etc.

AUTHORS

The author of **a2ping** is Szabó Péter <*pts@fazekas.hu*>.

a2ping is inspired by and historically based on the **epstopdf** Perl script modified by Thomas Esser, Sept. 1998, but his modifications have been removed from **a2ping**, and also **a2ping** and **epstopdf** do not share common code anymore. **epstopdf** is written by Sebastian Rahtz, for Elsevier Science. **epstopdf** contained extra tricks from Hans Hagen's texutil.

HISTORY

1999/05/06 v2.5 (Heiko Oberdiek)

```
* New options: --hires, --exact, --filter, --help.
* Many cosmetics: title, usage, ...
* New code for debug, warning, error
* Detecting of cygwin perl
* Scanning for %%{Hires,Exact,}BoundingBox.
* Scanning only the header in order not to get a wrong
  BoundingBox of an included file.
* (atend) supported.
* uses strict; (earlier error detecting).
* changed first comment from '%!PS' to '%!';
* corrected (atend) pattern: '\s*\(atend\)'
* using of $bbxpat in all BoundingBox cases,
  correct the first white space to '...Box:\s*$bb...'
* corrected first line (one line instead of two before 'if 0;';
```

2000/11/05 v2.6 (Heiko Oberdiek)

```
* %%HiresBoundingBox corrected to %%HiResBoundingBox
```

2001/03/05 v2.7 (Heiko Oberdiek)

```
* Newline before grestore for the case that there is no
  whitespace at the end of the eps file.
```

2003/02/02 (Szabó Péter)

```
* option --below
* removes DOS EPSF binary junk correctly
* adds all 3 BoundingBox DSC comments
* reads all 3 BoundingBox DSC comments, and picks the best
* forces BoundingBox to be an integer
* adds %%EndComments and proper %!PS-Adobe-?-? EPSF-?.? header
* adds %%Pages:
* adds invocation syntax: a2ping <infile.eps> <outfile.eps|pdf>
* can convert PDF to EPS (by calling pdftops(1)) and PDF to PDF
* emulates work for PDF input
```

2003/04/16 (Szabó Péter)

```
* added PS and sam2p support, renamed to a2ping
* sam2p and pdftops if $InputFilename eq '-';
* remove PJL UEL header from the beginning
* works for PS non-EPS files for input
* input support for PNG JPEG TIFF PNM BMP GIF LBM XPM PCX TGA via sam2p
* removes ^L (form feed) from end of EPS file
* -x=-c:rle to add sam2p options
```

2003/04/26 (Szabó Péter)

* omit the unnecessary setpagedevice calls when creating normal eps
* --noverbose --nocompress supported differently
* no more option defaults :-(
* justlib2
* multi-page output with PS:, PDF:, PCL5:
* after 'a2ping -pa4', file out.pcl says: 'HP PCL printer data - A4 page
  size', instead of 'US letter'
* justlib2-ified doesn't depend on Getopt::Long anymore
* fully supports filtering (stdin and/or stdout), PDF and PCL5 output to
  pipe (!$$ll_zero)
* adds DSC ''%%DocumentMedia: plain 612 792 0 () ()''
* BoundingBox precedence for EPS input: --PageSize, %%*BoundingBox,
  setpagedevice. Precedence for other inputs: --PageSize, setpagedevice,
  %%*BoundingBox

2003/09/25 (Szabó Péter)

* --bboxfrom=adsc: %%BoundingBox overrides -sDEVICE=bbox
* improved bbox discovery
* many bugfixes
* MetaPost EPS input fixes for prologues:=0;
* a2ping.pl -v --papersize=50,60 --bboxfrom=compute-gs t.ps t2.ps
* consistent bbox, --PageSize, /PageSize handling
* consistent --Resolution and --Duplex handling

2003/12/02 (Szabó Péter)

* --bboxfrom=compute-gs option to fix PS -> EPS bbox (gs -sDEVICE=bbox),

2004/02/10 v2.77 (Szabó Péter)

* the compute-pipe routine is now run unless --bboxfrom=guess with EPS
* added --gsextra=
* added --antialias=
* added FileFormat PBM, PGM, PPM
* separated FileFormat features to FL_* constants
* added --doc
* there is no default FileFormat (PDF) anymore