

NAME

asy – Asymptote: a script-based vector graphics language

SYNOPSIS

asy [*options*] [*file* ...]

DESCRIPTION

Asymptote is a powerful descriptive vector graphics language for technical drawings, inspired by MetaPost but with an improved C++-like syntax. Asymptote provides for figures the same high-quality level of typesetting that LaTeX does for scientific text.

OPTIONS

If no arguments are given, Asymptote runs in interactive mode.

If "-" is given as the file argument, Asymptote reads from standard input.

A summary of options is included below. The effect of most options can be negated by prepending **no** to the option name. Default values for most options may also be entered in the file **.asy/config.asy** in the user's home directory using the long form:

```
import settings;
batchView=true;
```

For a complete description, see the Info files.

-GPUblockSize n

Compute shader block size [8].

-GPUcompress

Compress GPU transparent fragment counts [false].

-GPUindexing

Compute indexing partial sums on GPU [true].

-GPUinterlock

Use fragment shader interlock [true].

-GPUlocalSize n

Compute shader local size [256].

-V,-View

View output; command-line only.

-absolute

Use absolute WebGL dimensions [false].

-a,-align C|B|T|Z

Center, Bottom, Top, or Zero page alignment [C].

-aligndir pair

Directional page alignment (overrides align) [(0,0)]. -animating [false]

-antialias n

Antialiasing width for rasterized output [2].

-auto3D

Automatically activate 3D scene [true].

- autobillboard**
3D labels always face viewer by default [true].
- autoimport str**
Module to automatically import.
- autoplain**
Enable automatic importing of plain [true].
- autoplay**
Autoplay 3D animations [false].
- autorotate**
Enable automatic PDF page rotation [false].
- axes3** Show 3D axes in PDF output [true].
- batchMask**
Mask fpu exceptions in batch mode [false].
- batchView**
View output in batch mode [false].
- bw** Convert all colors to black and white false.
- cd directory**
Set current directory; command-line only.
- cmyk** Convert rgb colors to cmyk false.
- c,-command str**
Command to autoexecute.
- compact**
Conserve memory at the expense of speed false.
- compress**
Compress images in PDF output [true]. -convertOptions str []
- d,-debug**
Enable debugging messages and traceback false.
- devicepixelratio n**
Ratio of physical to logical pixels [1].
- digits n**
Default output file precision [7].
- divisor n**
Garbage collect using purge(divisor=n) [2]. -dvipsOptions str []
- dvisvgmMultipleFiles**
dvisvgm supports multiple files [true]. -dvisvgmOptions str [--optimize]
- embed**
Embed rendered preview image [true].
- e,-environment**
Show summary of environment settings; command-line only.

- exitonEOF**
Exit interactive mode on EOF [true].
- fitscreen**
Fit rendered image to screen [true].
- framerate frames/s**
Animation speed [30]. -glOptions str []
- globalread**
Allow read from other directory true.
- globalwrite**
Allow write to other directory false.
- gray** Convert all colors to grayscale false. -gsOptions str []
- h,-help**
Show summary of options; command-line only.
- historylines n**
Retain n lines of history [1000]. -htmlviewerOptions str -hyperrefOptions str
[setpagesize=false,unicode,pdfborder=0 0 0]
- ibl** Enable environment map image-based lighting [false].
- iconify**
Iconify rendering window [false].
- image str**
Environment image name [snowyField].
- imageDir str**
Environment image library directory [ibl].
- inlineimage**
Generate inline embedded image [false].
- inlinetex**
Generate inline TeX code [false].
- inpipe n**
Input pipe [-1].
- interactiveMask**
Mask fpu exceptions in interactive mode [true].
- interactiveView**
View output in interactive mode [true].
- interactiveWrite**
Write expressions entered at the prompt to stdout [true]. -interrupt [false]
- k,-keep**
Keep intermediate files [false].
- keepaux**
Keep intermediate LaTeX .aux files [false].

- level n**
Postscript level [3].
- l,-listvariables**
List available global functions and variables [false].
- localhistory**
Use a local interactive history file [false].
- loop** Loop 3D animations [false].
- lossy** Use single precision for V3D reals [false].
- lsp** Interactive mode for the Language Server Protocol [false].
- m,-mask**
Mask fpu exceptions; command-line only.
- maxtile pair**
Maximum rendering tile size [(1024,768)].
- maxviewport pair**
Maximum viewport size [(0,0)].
- multiline**
Input code over multiple lines at the prompt [false].
- multipleView**
View output from multiple batch-mode files [false].
- multisample n**
Multisampling width for screen images [4].
- offline**
Produce offline html files [false].
- O,-offset pair**
PostScript offset [(0,0)].
- f,-outformat format**
Convert each output file to specified format.
- o,-outname name**
Alternative output directory/file prefix.
- outpipe n**
Output pipe [-1].
- paperheight bp**
Default page height [0].
- paperwidth bp**
Default page width [0].
- p,-parseonly**
Parse file [false].
- pdfreload**
Automatically reload document in pdfviewer [false]. -pdfreloadOptions str []

- pdfreloaddelay usec**
Delay before attempting initial pdf reload [750000]. -pdfviewerOptions str []
- position pair**
Initial 3D rendering screen position [(0,0)].
- prc** Embed 3D PRC graphics in PDF output [false].
- prerender resolution**
Prerender V3D objects (0 implies vector output) [0].
- prompt str**
Prompt [>].
- prompt2 str**
Continuation prompt for multiline input [...]. -psviewerOptions str []
- q,-quiet**
Suppress welcome text and noninteractive stdout [false].
- render n**
Render 3D graphics using n pixels per bp (-1=auto) [-1].
- resizestep step**
Resize step [1.2].
- reverse**
reverse 3D animations [false].
- rgb** Convert cmyk colors to rgb false.
- safe** Disable system call true.
- scroll n**
Scroll standard output n lines at a time [0].
- shiftHoldDistance n**
WebGL touch screen distance limit for shift mode [20].
- shiftWaitTime ms**
WebGL touch screen shift mode delay [200].
- spinstep deg/s**
Spin speed [60].
- svgemulation**
Emulate unimplemented SVG shading [true].
- tabcompletion**
Interactive prompt auto-completion [true].
- tex engine**
latex|pdflatex|xelatex|lualatex|tex|pdftex|luatex|context|none [latex].
- thick** Render thick 3D lines [true].
- thin** Render thin 3D lines [true].
- threads**
Use POSIX threads for 3D rendering [true].

- toolbar**
Show 3D toolbar in PDF output [true].
- s,-translate**
Show translated virtual machine code [false].
- twice** Run LaTeX twice (to resolve references) [false].
- twosided**
Use two-sided 3D lighting model for rendering [true].
- u,-user str**
General purpose user string.
- v3d** Embed 3D V3D graphics in PDF output [false].
- v,-verbose**
Increase verbosity level (can specify multiple times) 0.
- version**
Show version; command-line only.
- vibrateTime ms**
WebGL shift mode vibrate duration [25].
- viewportmargin pair**
Horizontal and vertical 3D viewport margin [(0.5,0.5)].
- wait** Wait for child processes to finish before exiting [false].
- warn str**
Enable warning; command-line only.
- webgl2**
Use webgl2 if available [false].
- where**
Show where listed variables are declared [false].
- wsl** Run asy under the Windows Subsystem for Linux [false].
- xasy** Interactive mode for xasy false.
- zoomPinchCap limit**
WebGL maximum zoom pinch [100].
- zoomPinchFactor n**
WebGL zoom pinch sensitivity [10].
- zoomfactor factor**
Zoom step factor [1.05].
- zoomstep step**
Mouse motion zoom step [0.1].

SEE ALSO

Asymptote is documented fully in the asymptote Info page. The manual can also be accessed in interactive mode with the "help" command.

AUTHOR

Asymptote was written by Andy Hammerlindl, John Bowman, and Tom Prince.

This manual page was written by Hubert Chan for the Debian project (but may be used by others).