NAME

icotoppm − convert bitmaps from ICO to ppm format

SYNOPSIS

icotoppm [*file*]

DESCRIPTION

icotoppm converts ICO bitmap files into PPM bitmaps. If no file is specified, the ICO file is read from standard input.

RESTRICTIONS

Multi icon files are not supported. Only RGB encoding is supported.

AUTHOR

SEE ALSO

ppm(5)

NAME

pgmclouds − generate a random picture of clouds

SYNOPSIS

pgmclouds [**−x** *width*] [**−y** *height*]

DESCRIPTION

pgmclouds generates a picture which looks like a cloudy sky. The algorithm first paints the corner pixels, which may have very different gray scales. In subsequent steps, pixels in between are painted by using an average of neighbour pixels plus/minus a random value, which interval is the smaller the nearer the pixels are to each other.

OPTIONS

−x *width*

Generate a picture which is *width* pixels wide. The default is 512.

−y *height*

Generate a picture which is *height* pixels high. The default is 512.

AUTHOR

Michael Haardt, 1998.

HISTORY

The algorithm used is a slightly modified version of the algorithm presented in “Thomas Graf: *Mathematische Wolken*, Amiga-Magazin 10/1987, p. 91–92”.

SEE ALSO

pgm(5)

NAME

pgmfract − generate fractal as PGM picture

SYNOPSIS

pgmfract [**−s** *size*] [**−d** *depth*] [**−p** *xpos*:*ypos*:*distance*]

DESCRIPTION

pgmfract computes a fractal and outputs it to standard output as PGM file. Each x, y pixel of the picture corresponds to the complex number $c = x + yi$ in the formula $z' = z^2 + c$. The first iteration begins with $z = x + iy$, following iterations use the previously calculated value of z'. As soon as the absolute value of z becomes larger than 2, it is known that the iteration will converge against infinity and the pixel is coloured depending on the number of iterations. Some values of c never cause z to become larger than 2, so the iteration depth has to be limited. If this limit is reached, the pixel will be black. The Mandelbrot set is the set of values for c, which never cause z to converge against infinity, so limiting the depth causes a small error. Using a large enough depth minimizes this error.

OPTIONS

−s *size* Change the picture size from the default of 600 pixel in each direction to *size* pixels.

−d *depth*
Change the maximum iteration depth from the default of 600 iterations to *depth* iterations.

−p *xpos*:*ypos*:*distance*
Change the interval of the complex start values from **0.0:0.0:2.0** to the new center *xpos* an *ypos* with an interval of *distance* in each direction.

−j *cr*:*ci* Compute a julia set instead of a mandelbrot set by specifying a fixed value c for iterations instead of a pixel dependent value $x + iy$. Interesting subsections from the mandelbrot set yield interesting julia sets.

EXAMPLES

Beautiful sections are:

```
pgmfract -p -0.5:0.0:1.5 >fractal.pgm
pgmfract -p -0.7660315:0.100861:0.0003 >fractal.pgm
pgmfract -p -1.252758:0.342541:0.007629 >fractal.pgm
pgmfract -p -0.368056:0.645833:0.097222 >fractal.pgm
pgmfract -p -0.17596915:1.08649105:0.0000004 >fractal.pgm
pgmfract -j -0.17596915:1.08649105 -p 0.0:0.0:0.01 >fractal.pgm
pgmfract -d 2000 -p -0.74567846:0.09998153:0.00012307 >fractal.pgm
pgmfract -d 2000 -j -0.74567846:0.09998153 -p 0.0:0.0:0.1 >fractal.pgm
```

AUTHOR

Michael Haardt <michael@moria.de>.

HISTORY

The original version of this program has been written in 6502 Assembler for an Acorn Electron in 1985. From there, it went to Small-C for the Z80 on a PCW8256 in 1986 to ANSI-C and Linux in 1998.

SEE ALSO

pgm(5)

NAME

pgmmountains − generate a random landscape of mountains and sea

SYNOPSIS

pgmmountains

DESCRIPTION

pgmmountains generates a random landscape of mountains and sea on standard output. The algorithm starts with a single triangle, which is divided in four triangles. The corners of these triangles are modified using random numbers. Each of these triangles is again splitted. If corners fall below heigth zero, they will be painted as sea.

AUTHOR

Michael Haardt, 1998.

HISTORY

The algorithm used is a slightly modified version of the algorithm presented in “Frank/Kreuder, Norbert Siepenkötter: *Gebirge aus dem Computer*, Amiga-Magazin 10/1987, p. 83”.

SEE ALSO

pgm(5)

NAME

rgbpalettetoppm − convert ASCII RGB Palette to ppm format

SYNOPSIS

rgbpalettetoppm

DESCRIPTION

Rgbpalettetoppm converts ASCII RGB palettes (each colour described by the numeric values for red, green and blue) to PPM bitmaps. The palette read from standard input and the ppm file is written to standard output.

This program is typically used to colour PGM bitmaps with palettes from Gimp or PlotPlus using the **-map** switch of *pgmtoppm*(1).

AUTHOR

Written 1998 by Michael Haardt (michael@moria.de). This program is put into the public domain.

SEE ALSO

ppm(5), pgmtoppm(1)