Hpcdtoppm User Manual

hpcdtoppm

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NAME

hpcdtoppm - convert a Photo-CD image into a PBM image

SYNOPSIS

hpcdtoppm *infile* [**-a**] [{**-C**|**-0**|**-Overview**|**-O**} *file opt*] [**-c0**] [**-c-**] [**-c+**] [**-crop**] [**-d**] [**-dpi** *f*] [**-eps**] [**-epsd**] [**-epsg**] [**-fak** *scale*] [**-hori**] [**-i**] [**-l**] [**-m**] [**-n**] [**-pb** *pos*] [**-pgm**] [**-ph** *height*] [**-pl** *pos*] [**-pos**] [**-ppm**] [**-ps**] [**-psd**] [**-psg**] [**-pw** *width*] [**-r**] [**-rep**] [**-S** *long short*] [**-s**] [**-vert**] [**-x**] [**-ycc**] [**-1**|**-Base/16**|**-128x192**] [**-2**|**-Base/4**|**-256x384**] [**-3**|**-Base**|**-512x768**] [**-4**|**-4Base**|**-1024x1536**] [**-5**|**-16Base**|**-2048x3072**] [**-6**|**-64Base**|**-4096x6144**] [*outfile*]

DESCRIPTION

This program is part of Netpbm.

This program accepts Photo-CD image or overview file data from the specified input file, *infile* (or, if the resolution is lower than 64Base and the file argument is specified as **-**, from standard input), and writes either PBM Format or PostScript to the specified output file (or to standard output if no file is specified).

On a standard Photo-CD, image files appear in the directory **photo_cd/images**, in files with names of the form img*nnnn*.pcd, where *nnnn* is a 4-digit-number. The overview file appears in **photo_cd/overview.pcd**.

Photo-CD images are stored using as many as 6 different resolutions:

Format	Resolution
64Base	4096x6144 (ProPhotoCD only)
16Base	2048x3072
4Base	1024x1536
Base	512x768
Base/4	256x384
Base/16	128x192

The overview file employs Base/16 format.

OPTIONS

Invoking **hpcdtoppm** without arguments produces a list of default values. Note that you can supply only one size option.

-a Automatically determine image orientation (this option is experimental, and does not work for overview files).

{**-C** | **-0** | **-Overview** | **-O** } *file opt*Extract all images from an overview file. The mandatory *file* argument is the name of a PPM file; output files are named *filennnn*, where *nnnn* is a 4-digit number. Overview images are extracted in their original Base/16 format. The value of *opt* determines the orientation of the contact sheet image; recognized values are:

n Do not rotate the image.

l Rotate the picture counter-clockwise (portrait mode).

r Rotate the picture clockwise (portrait mode).

-c0 Do not correct (brighten or darken) the image.

-c- Darken the image.

-c+ Brighten the image.

-crop Cut off the black frame which sometimes appears at the image borders.

-d Show only the decompressed difference rather than the complete image (applicable only to 4Base and 16Base images).

-dpi *res*Set the printer resolution to *res* for dithered Postscript images.

-eps Write a RGB Encapsulated Postscript color image.

-epsd Write a Floyd-Steinberg dithered image in Encapsulated Postscript.

-epsg Write a grayscale image in Encapsulated Postscript.

-fak *scale*Set the scaling factor for dithered PostScript images to *scale*.

-hori Flip the image horizontally.

-i Send information from an image file header to Standard Error.

-l Rotate the picture counter-clockwise (portrait mode).

-m Write messages about the phases of decoding to standard error.

-n Do not rotate the image.

-pb *pos*Set the bottom position of the Postscript image to *pos*.

-pgm Write a *pgm* (grayscale) image.

-ph height Set the height of the Postscript image to *height*.

-pl *pos*Set the leftmost position of the Postscript image to *pos*.

-pos Print the relative starting position of the data for the current resolution.

-ppm Write a *ppm* RGB (color) image.

-ps Write a RGB Postscript color image.

-psd Write a Floyd-Steinberg dithered image in Postscript.

-psg Write a Postscript grayscale image.

-pw width Set the width of the Postscript image to *width*.

-r Rotate the picture clockwise (portrait mode).

-rep Try to jump over reading errors in the Huffman code.

-S *long short*Cut out a subrectangle with boundaries defined by the values:

long For the longer side of the image.

short For the shorter side of the image.

where *long* and *short* take one of two forms:

a-b Cut from position *a* to position *b*.

a+b Starting at offset *a*, cut a length of *b*.

and where *a* and *b* are either integers representing pixel locations, or floating point values over the range [0.0 ... 1.0], representing the fraction of the length of a side.

-s Apply a simple sharpness operator to the luminosity channel.

-vert Flip the image vertically.

-x Overskip Mode (applicable to Base/16, Base/4, Base and 4Base). In Photo-CD images the luminosity channel is stored in full resolution, the two chromaticity channels are stored in half

resolution only and have to be interpolated. In Overskip Mode, the chromaticity channels of the next higher resolution are taken instead of interpolating. To see the difference, generate one PPM with and one PPM without this option. Use **pamarith** to generate the difference image of these two images. Call **ppmhist** for this difference or show it with **xv** (push the **HistEq** button in the color editor).

-ycc Write the image in a variation on PPM format in which the samples are YCC instead of RGB.

-1|**-Base/16**|**-128x192**Extract the Base/16 image.

-2|**-Base/4**|**-256x384**Extract the Base/4 image.

-3|**-Base**|**-512x768**Extract the Base image.

-4|**-4Base**|**-1024x1536**Extract the 4Base image.

-5|**-16Base**|**-2048x3072**Extract the 16Base image.

-6|**-64Base**|**-4096x6144**Extract the 64Base image. This resolution can be extracted from ProPhotoCD images only. The path of the 64Base extension files is derived from the path to the image file. This means that it doesn't work on stdin an the directory structure must be the very same as on the ProPhotoCD.

Postcript Output

For Postscript output (options **-ps**, **-eps**, **-psg**, **-epsg**, **-psd**, **-epsg**) you can define both the resolution and placement of the image. Both size and position are specified in points (1/72 inch).

The position of the image (where the origin is assumed to be at the lower left corner of the page) is controlled by the **-pl** and **-pb** options (applicable at all resolutions).

The size of color and grayscale images is changed with the **-pw** and **-ph** options. Every image pixel is mapped onto one Postscript pixel.

There are three modes of control for dithered Postscript:

Image size (**-pw** and **-ph**)

Printer resolution(**-dpi**)

Scaling factor(**-fak**)

These three factors are interdependent, hence no more then two can be specified simultaneously. Using **-dpi** and the **-pw/-ph** options together often yields pleasing results. Even using the default values for these options will produce results differing from those obtained without use of the options.

Limitations

The program ignores read protection.

The **-i** option is not working correctly.

Available information obout the Photo-CD format is vague; this program was developed by trial-and-error after staring at hex-dumps. Please send bugs reports and patches to the author.

SEE ALSO

pcdovtoppm, pamarith, ppm, ppmhist, pnmquant, ppmtopgm, ppmtorgb3, **xv**

VERSION

The name **hpcdtoppm** stands for "Hadmut's pcdtoppm," to make it distinguishable in the event that someone else is building a similar application and naming it **pcdtoppm**.

This is version 0.6.

AUTHOR

Copyright (c) 1992, 1993, 1994 by Hadmut Danisch (danisch@ira.uka.de).

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Manual page extensively modified by R. P. C. Rodgers (rodgers@nlm.nih.gov).

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