Ppmtoyuv User Manual

ppmtoyuv

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NAME

ppmtoyuv - convert a PPM image to an Abekas YUV file

SYNOPSIS

ppmtoyuv [*ppmfile*]

DESCRIPTION

This program is part of Netpbm.

ppmtoyuv reads a PPM image as input and produces an Abekas YUV file as output.

The output file contains a raster of four byte YUV codes, each uniquely associated with two side-by-side pixels in the image. The raster contains rows in order from top to bottom, and within each row columns from left to right. So the output file size in bytes is twice the number of pixels in the image.

Each YUV code is associated with two pixels from the input image that we will call the left pixel and the right pixel. The 2nd byte of the code is the Y value of the left pixel. The 4th byte of the code is the Y value of the right pixel. The 1st byte of the code is an average of the U value of the pixel to the left of the left pixel, the left pixel, and the right pixel. The 3rd byte of the code is analogous for V values. These averages are weighted arithmetic means where the left pixel is weighted double what the other two pixels are weighted.

This format is reminiscent of but rather different from the common YUV 4:2:0 format (aka YUV 420) and the similar YUV 4:4:4, YUV 4:2:2, YUV 4:1:1, YUV 4:1:1s, and YUV 4:1:0. In YUV 4:2:0, the raster is different for even numbered lines and odd numbered lines. On even numbered lines, there are twice as many bits for Y of each pixel as for U or V. On odd numbered lines, there are the same number of bits for Y as on even numbered lines, but no bits at all for U and V.

SEE ALSO

yuvtoppm, ppmtoeyuv, ppmtoyuvsplit, ppm

AUTHOR

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