Pamflip User Manual

pamflip

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NAME

pamflip - flip or rotate a PAM or PNM image

SYNOPSIS

pamflip { **-leftright** | **-lr** | **-topbottom** | **-tb** | **-transpose** | **-xy** | **-rotate90** | **-r90** | **-cw** | **-rotate270** | **-r270** | **-ccw** | **-rotate180** | **-r180** **-null** | **-xform=***xform1***,***xform2*... } [**-memsize=***mebibytes*] [**-pagesize=***bytes*] [*pamfile*]

All options can be abbreviated to their shortest unique prefix. You may use two hyphens instead of one to designate an option. You may use either white space or an equals sign between an option name and its value.

DESCRIPTION

This program is part of Netpbm.

pamflip flips a PAM or PNM image top for bottom or left for right, or transposes it horizontal for vertical, or rotates it 1, 2, or 3 quarter turns.

To rotate at other angles, use **pnmrotate**. It is much slower, though.

The input image is *pamfile*, or Standard Input if *pamfile* is not specified.

To flip/rotate a JFIF (JPEG) image losslessly, use **jpegtran**. **jpegtran** is part of the Independent Jpeg Group's compression library package, not part of Netpbm. The normal Netpbm way to flip a JFIF file would be to convert it to PNM, use **pamflip**, and convert back to JFIF. But since JPEG compression is lossy, the resulting image would have less quality than the original. **jpegtran**, on the other hand, can do this particular transformation directly on the compressed data without loss.

OPTIONS

You must supply exactly one of the following options:

pamflip's predecessor (before Netpbm 10.7 - August 2002) **pnmflip** did not have the **-xform** option and instead allowed you to specify any number of the other options, including zero. It applied all the indicated transformations, in the order given, just like with **pamflip**'s **-xform** option. (Reason for the change: this kind of interpretation of options is inconsistent with the rest of Netpbm and most of the Unix world, and thus hard to understand and to implement).

-leftright

-lr Flip left for right.

-topbottom

-tb Flip top for bottom.

-transpose

-xy Transpose horizontal for vertical. I.e. make the pixel at (x,y) be at (y,x).

-rotate90

-r90

-ccw Rotate counterclockwise 90 degrees.

-rotate180

-r180 Rotate 180 degrees.

-rotate270

-r270

-cw Rotate counterclockwise 270 degrees (clockwise 90 degrees)

-null No change. (The purpose of this option is the convenience of programs that invoke **pamflip** after computing the kind of transformation desired, including none at all).

This option was new in Netpbm 10.13 (December 2002).

-xform=*xform1***,***xform2*...Apply all the transforms listed, in order. The valid values for the transforms are as follows and have the same meanings as the identically named options above.

leftright

topbottom

transpose

This option was new in Netpbm 10.13 (December 2002).

The following options help **pamflip** use memory efficiently. Some flipping operations on very large images can cause **pamflip** to have a very large working set, which means if you don't have enough real memory, the program can page thrash, which means it takes a ridiculous amount time to run. If your entire image fits in real memory, you don't have a problem. If you're just flipping top for bottom or left for right, you don't have a problem. Otherwise, pay attention. If you're interested in the details of the thrashing problem and how **pamflip** approaches it, you're invited to read a complete explanation in comments in the source code.

-memsize=*mebibytesmebibytes* is the size in mebibytes (aka megabytes) of real memory (not virtual) available for **pamflip**. **pamflip** does nothing special to allocate real memory or control it's allocation -- it gets whatever it gets just by referencing virtual memory normally. This is the maximum amount that **pamflip** can be expected to end up with by doing that. This is just about impossible for you to know, of course, but you can estimate. The total real memory in your system should be a major factor in your estimate.

When you specify **-memsize** and are doing a row for column type of transformation, **pamflip** does the transformation in multiple passes, each one with a working set size less than the specified value.

If your estimate is even slightly too large, it's the same as infinity. If you estimate too small, **pamflip** will use more passes than it needs to, and thus will slow down proportional to the underestimate.

If you do not specify **-memsize**, **pamflip** assumes infinite real memory and does the entire transformation in one pass.

This option did not exist before Netpbm 10.7 (August 2002).

-pagesize=*bytesbytes* is the size in bytes of a paging unit -- the amount of memory that gets paged in or out as an indivisible unit -- in your system. The default is 4KiB.

This option did not exist before Netpbm 10.7 (August 2002).

Miscellaneous options:

-verbose This option causes **pamflip** to issue messages to Standard Error about its progress.

SEE ALSO

pnmrotate, pnm, **jpegtran** manual

HISTORY

pamflip replaced **pnmflip** in Netpbm 10.13 (December 2002). **pamflip** is backward compatible, but also works on PAM images.

AUTHOR

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