NAME

imcltroll - Roll color lookup table by a number of entries

SYNOPSIS

imcltroll [*options*] *infilename outfilename*

DESCRIPTION

imcltroll reads each image in the input file, extracts the color lookup table, rolls it, then writes it and its image to the output file. The input and output image file formats may be different.

OPTIONS

imcltroll has a variety of options in the following five categories:

File Selection	What input and output files to use
Format Selection	What image file format to use
Format Control	What variant of a file format to generate
Standard	Standard generic options on all SDSC tools
Rolling	How the image's CLT is rolled

File Selection, *Format Selection*, *Format Control*, and *Standard* options are common to all SDSC image tools and are discussed in depth in the man page for imconv(1IM).

All options can be abbreviated to the first few unique characters.

Rolling Options

Rolling a color lookup table, or CLT, copies entry 0 to entry *n*, entry 1 to entry *n*+1, entry 2 to entry *n*+2, and so on. Entries that roll off the bottom of the CLT wrap around back to the top of the CLT, creating a rolling, or cycling, effect in the copy.

The -roll *n* option selects rolling of the CLT by *n* entries. Positive values for *n* roll entries downwards towards the bottom of the CLT, while negative values roll entries upwards towards the top.

The input file must contain images that use CLTs, such as color-indexed images. RGB images, for instance, typically do not have CLTs and are inappropriate for use by imcltroll.

NOTES

CLT rolling is a technique used to find and highlight aspects of an image generated, for example, by a CAT-scan. Different color indexes in a CAT-scan correspond to different types of matter, such as bone, muscle, and air. To highlight just the bone, a CLT may be constructed that sets a range of color indexes to, say, bright red, and sets the rest to black.

When the red range of the CLT corresponds to the CAT-scan's bone indexes, then all boney matter in the image is highlighted in red. To highlight a different set of image color indexes, roll the CLT far enough to bring the reds into the right index range, such as those for muscle. By sweeping the red values back and forth through the CLT, one can zero in on color indexes of interest.

In rare, specialized applications, RGB images may have color lookup tables. In these cases, imcltroll will correctly roll the RGB image's color lookup table, store it, and place the RGB image back into the output file. However, many RGB image display tools choose to ignore CLTs associated with RGB images. These tools will fail to show the effects of rolling the color lookup table. This is the fault of the RGB image display tool, and not imcltroll.

Sometimes RGB images have color lookup tables. When you rotate the color lookup table, you may not perceive any changes in the image since some display programs may throw this color lookup table out and use just the RGB information.

For notes regarding file format conversion and standard image tool options, see the man page on imconv(1IM).

With no roll arguments, the actions of imcltroll default to the same as the SDSC image format conversion tool imconv(1IM), but they take a little longer.

Error messages are reported to stderr.

EXAMPLES

Roll an XWD image's color lookup table by 30 entries:

```
imcltroll in.xwd -roll 30 out.xwd
```

Roll a color indexed Sun rasterfile backwards 5 entries and store the result as a GIF file:

```
imcltroll in.ras -roll -5 out.gif
```

SEE ALSO

imroll (1IM), ImCltRoll (3IM)

For information on SDSC's image library, see imintro(3IM).

AUTHOR

Chris Groening
San Diego Supercomputer Center

See the individual file format man pages for the authors of the underlying format read and write code. The names of these man pages begin with the letters "im," followed by the format name. For example, the name of the TIFF man page is imtiff. To display it, enter man imtiff.

CONTACT

SDSC consultants, (619)534-5100, consult@y1.sdsc.edu