

NAME

compare - mathematically and visually annotate the difference between an image and its reconstruction.

SYNOPSIS

compare *input-file input-file [options] output-file*

OVERVIEW

The **compare** program is a member of the ImageMagick(1) suite of tools. Use it to mathematically and visually annotate the difference between an image and its reconstruction.

For more information about the compare command, point your browser to <file:///usr/local/share/doc/ImageMagick-7/www/compare.html> or <http://imagemagick.org/script/compare.php>.

DESCRIPTION

Image Settings:

- alpha option on, activate, off, deactivate, set, opaque, copy
 transparent, extract, background, or shape
- authenticate value decrypt image with this password
- background color background color
- colorspace type alternate image colorspace
- compose operator set image composite operator
- compress type type of pixel compression when writing the image
- decipher filename convert cipher pixels to plain pixels
- define format:option
 define one or more image format options
- density geometry horizontal and vertical density of the image
- depth value image depth
- dissimilarity-threshold value
 maximum distortion for (sub)image match
- encipher filename convert plain pixels to cipher pixels
- extract geometry extract area from image
- format "string" output formatted image characteristics
- fuzz distance colors within this distance are considered equal
- gravity type horizontal and vertical text placement
- identify identify the format and characteristics of the image
- interlace type type of image interlacing scheme
- highlight-color color
 emphasize pixel differences with this color

- limit type value pixel cache resource limit
- lowlight-color color
 - de-emphasize pixel differences with this color
- metric type measure differences between images with this metric
- monitor monitor progress
- negate replace each pixel with its complementary color
- profile filename add, delete, or apply an image profile
- quality value JPEG/MIFF/PNG compression level
- quiet suppress all warning messages
- quantize colorspace reduce colors in this colorspace
- read-mask filename associate a read mask with the image
- regard-warnings pay attention to warning messages
- repage geometry size and location of an image canvas
- respect-parentheses settings remain in effect until parenthesis boundary
- sampling-factor geometry
 - horizontal and vertical sampling factor
- seed value seed a new sequence of pseudo-random numbers
- set attribute value set an image attribute
- similarity-threshold value
 - minimum distortion for (sub)image match
- size geometry width and height of image
- subimage-search search for subimage
- synchronize synchronize image to storage device
- taint declare the image as modified
- transparent-color color
 - transparent color
- type type image type
- write-mask filename associate a write mask with the image
- verbose print detailed information about the image
- virtual-pixel method
 - virtual pixel access method

Image Operators:

- auto-orient automatically orient image
- brightness-contrast geometry
 - improve brightness / contrast of the image
- distort method args
 - distort images according to given method and args
- level value adjust the level of image contrast
- resize geometry resize the image

- rotate degrees apply Paeth rotation to the image
- sigmoidal-contrast geometry
 lightness rescaling using sigmoidal contrast enhancement
- trim trim image edges

Image Channel Operators:

- separate separate an image channel into a grayscale image

Image Sequence Operators:

- crop geometry cut out a rectangular region of the image
- write filename write images to this file

Image Stack Operators:

- delete indexes delete the image from the image sequence

Miscellaneous Options:

- channel mask set the image channel mask
- debug events display copious debugging information
- help print program options
- log format format of debugging information
- list type print a list of supported option arguments
- version print version information

By default, the image format of 'file' is determined by its magic number. To specify a particular image format, precede the filename with an image format name and a colon (i.e. ps:image) or specify the image type as the filename suffix (i.e. image.ps). Specify 'file' as '-' for standard input or output.

Two images are considered similar if their difference according to the specified metric and fuzz value is 0, with the exception of the normalized cross correlation metric (NCC), where two images are considered similar when their normalized cross correlation is 1. The default metric is NCC.

The compare program returns 2 on error, 0 if the images are similar, or a value between 0 and 1 if they are not similar.

SEE ALSO

ImageMagick(1)

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