

NAME

ra_tiff - convert RADIANCE picture to/from a TIFF color or greyscale image

SYNOPSIS

```
ra_tiff [ -z|-L|-l|-f|-w ][ -b ][ -e +/-stops ][ -g gamma ] { in.hdr|- } out.tif
ra_tiff -r [ -x ][ -g gamma ][ -e +/-stops ] in.tif [ out.hdr|- ]
```

DESCRIPTION

Ra_tiff converts between RADIANCE and TIFF image formats. The *-g* option specifies the exponent used in gamma correction; the default value is 2.2, which is the recommended value for TIFF images.

The *-b* option can be used to specify an 8-bit greyscale TIFF output file. The type of input file is determined automatically.

The *-z* option will result in LZW compression of the TIFF output file. The *-L* option specifies SGILOG compression, which is recommended to capture the full dynamic range of the Radiance picture. However, since many TIFF readers do not yet support this format, use this option under advisement. The *-l* option specifies SGILOG24 compressed output, which has less dynamic range than SGILOG, but may be smaller in some cases. (It is usually larger.) The *-f* option specifies 32-bit IEEE floating-point/primary output, which is the highest resolution format but results in very large files, since each RGB pixel takes 96 bits (12 bytes) and does not compress well. The *-w* option specifies 16-bit/primary output, which is understood by some photo editing software, such as Adobe Photoshop. Decompression is automatically determined for TIFF input.

The *-e* option specifies an exposure compensation in f-stops (powers of two). Only integer stops are allowed, for efficiency.

If the Radiance input is a hyperspectral picture, it will be converted accurately if the output is anything but 24-bit RGB. In the latter case, the converted colors will be approximate.

The *-r* option invokes a reverse conversion, from a TIFF image to a RADIANCE picture. The RADIANCE picture file can be taken from the standard input or sent to the standard output by using a hyphen ('-') in place of the file name, but the TIFF image must be to or from a file. The *-x* option can be used to specify an XYZE Radiance output file, rather than the default RGBE.

EXAMPLES

To convert a Radiance picture to SGILOG-compressed TIFF format:

```
ra_tiff -L scene1.hdr scene1.tif
```

To later convert this image back into Radiance and display using human visibility tone-mapping:

```
ra_tiff -r scene1.tif scene1.hdr
ximage -e human scene1.hdr
```

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BUGS

Many TIFF file subtypes are not supported.

A gamma value other than 2.2 is not properly recorded or understood if recorded in the TIFF file.

SEE ALSO

pfilt(1), *ra_bmp*(1), *ra_bn*(1), *ra_ppm*(1), *ra_pr*(1), *ra_pr24*(1), *ra_t8*(1), *ra_t16*(1), *ximage*(1)