## NAME

imsplit - Splits a multi-image file into separate files

## SYNOPSIS

imsplit [*options*] *infilename outfilename*

## DESCRIPTION

imsplit reads in the multi-image input file and splits its contents into multiple single-image output files. The input and output image file formats may be different.

## OPTIONS

imsplit 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 |

*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.

### Output File Names

Output file names are generated automatically based upon a given output file name template. The file name template must include the special character code "%d", like the C language printf(3) print format directive. This template will be used to generate a series of output image file names by replacing the "%d" with integer frame numbers, one after another. The template myimage.%d.rgb, for instance, could generate the file names myimage.0.rgb, myimage.1.rgb, myimage.2.rgb, and so on.

By default, all images in the input file are split out and written to separate image files. File name frame numbers will range from 0 (for the first image) to *n-1* (for the last image), where *n* is the number of images in the input file.

The -frames *list...* option may be given one or more times to explicitly list the input file frames that are to be extracted. The -frames option takes a list of one or more *ranges*, each of which is a single value, or a range of values taking one of the following forms:

| *range* | Extract Frames |
|---|---|
| *n* | *n* only. |
| *n-* | *n* through the end of the input file. |
| *n-m* | *n* through *m*. |

There is no space between *n*, the dash, and *m*. *n* need not be a value less than *m*.

Frame numbers listed in -frames options will be the same as those used for generating output file names.

The following are typical invocations of imsplit using -frames lists:

```
imsplit many.hdf -frames 0 1 2 image.%d.tiff
imsplit many.hdf -frames 0-5 6 7 9-12 image.%d.rgb
imsplit many.hdf -frames 9-12 6 0-3 image.%02d.ras
imsplit many.hdf -frame 0 -frame 1 -frame 32 -frame 8-10 5 image.%d.gif
```

## NOTES

All of the output files will be written using the same image file format. This need not be the same as the file format used by the input file.

Multi-image files handled by imsplit may be created using imcat(1IM).

Most image file formats cannot support the storage of multiple images in the same file. This is a limitation of the file format design, not imsplit.

imsplit uses the C language sprintf(3) routine to replace the file name template's "%d" with image frame numbers. The use of sprintf(3) means the full range of "%d" format directive syntax is available in generating output file names. While the sprintf(3) man page has full details on the "%d" print directive, the following is a summary as it applies to output file naming:

The "%d" directive has the following general syntax:

"%" [*flags*] [*digit*] ["." *precision*] "d"

The directive always starts with a "%" character and ends with a "d" character. Field names between the [ ]s in the syntax above are optional. With no optional field value, the simplest form of the directive is just "%d".

*flags* Following the "%" is an optional set of *flags* characters:

| *flag* | Meaning |
|---|---|
| - | Left-justify the frame number. |
| + | Always use the sign (+ or -) of the number. |
| (blank) | Use a blank instead of a + for positive frame numbers. |

Except for peculiar file naming, users of imsplit can omit the optional *flags* portion of a print directive.

*digit* Following the *flags* is an optional *digit* field that gives the field width of the number, in characters. If the number requires fewer than this minimum, it will be padded on the right or left with blanks (padding is controlled by the - *flag* mentioned above). If the number requires more than this minimum, it will be taken.

The *digit* field can be preceded by a 0 (zero) to cause padding to be done with leading zeros instead of blanks. This is useful when referring to frame numbers of the form "001," "002," "003," and so on.

*precision*

The *digit* field may be optionally followed by a "." (period) and a *precision* number that gives the minimum number of digits for the frame number. This isn't particularly useful for users of imsplit and can be skipped.

The following are a few typical "%d" directives for use in imsplit:

%d No leading zeros or blanks. Generates numbers like "0," "1," "2," "3," etc.

%03d Leading zeros to fill 3 characters, including the number. Generates numbers like "000," "001," "002," "003," etc.

%.3d Same effect as "%03d".

In order to split apart multi-image files, imsplit must first read in the entire file's image data. This can take up quite a bit of memory, as well as take a long time. If the host does not have enough memory and swap space, imsplit will fail with a memory allocation error.

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

Error messages are reported to stderr.

## EXAMPLES

Extract all the images in a multi-image HDF file and save them as Sun raster files:

```
imsplit many.hdf single%02d.ras
```

Extract the images 0, 1, 2, 3, and 18 from a multi-image TIFF file:

```
imsplit movie.tiff -frames 0-3 18 image.%02d.tiff
```

## SEE ALSO

imcat (1IM)

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

## AUTHORS

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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

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