

## NAME

MIFF - Magick Image File Format is a platform-independent format for storing bitmap images. MIFF is a part of the ImageMagick toolkit of image manipulation utilities for the X Window System. ImageMagick is capable of converting many different image file formats to and from MIFF (e.g. JPEG, XPM, TIFF, etc.).

## SYNOPSIS

```
#include <image.h>
```

## DESCRIPTION

A MIFF image file consist of two sections. The first section is a header composed of keywords describing the image in text form. The next section is the binary image data. The header is separated from the image data by a **:** character immediately followed by a **newline**.

The MIFF header is composed entirely of LATIN-1 characters. The fields in the header are keyword and value combination in the *keyword=value* format, with each keyword and value separated by an equal sign (=). Each *keyword=value* combination is delimited by at least one control or whitespace character. Comments may appear in the header section and are always delimited by braces. The MIFF header always ends with a colon (:) character, followed by a **newline** character. It is also common for a **formfeed** and a **newline** character to appear before the colon. You can then list the image keywords with *more(1)*, without printing the binary image that follows the colon separator.

The following is a list of *keyword=value* combinations that may be found in a MIFF file:

**class=DirectClass**

**class=PseudoClass** the type of binary image data stored in the MIFF file. If this keyword is not present, **DirectClass** image data is assumed.

**colors=value**

the number of colors in a **DirectClass** image. For a **PseudoClass** image, this keyword specifies the size of the colormap. If this keyword is not present in the header, and the image is **PseudoClass**, a linear 256 color grayscale colormap is used with the image data.

**columns=value**

the width of the image in pixels. This is a required keyword and has no default.

**compression=RunlengthEncoded**

**compression=Zip** the type of algorithm used to compress the image data. If this keyword is not present, the image data is assumed to be uncompressed.

**delay** <1/100ths of a second>

the interframe delay in an image sequence. The maximum delay is 65535.

**depth=8**

**depth=16** the depth of a single color value representing values from 0 to 255 (depth 8) or 65535 (depth 16). If this keyword is absent, a depth of 8 is assumed.

**gamma=value**

the gamma of the image. If it is not specified, a gamma of 1.0 (linear brightness response) is assumed,

**id=ImageMagick**

identifies the file as a MIFF-format image file. This keyword is required and has no default. Although this keyword can appear anywhere in the header, it should start as the first keyword of the header in column 1. This will allow programs like **file(1)** to easily identify the file as MIFF.

**label= value""**

defines a short title or caption for the image. If any whitespace appears in the label, it must be enclosed within double quotes.

**matte=True**

**matte=False** specifies whether a **DirectClass** image has matte data. Matte data is generally useful

for image compositing. This keyword has no meaning for pseudo-color images.

**montage**=<width>x<height>{+-}<x offset>{+-}<y offset>

size and location of the individual tiles of a composite image. See **X(1)** for details about the geometry specification.

Use this keyword when the image is a composite of a number of different tiles. A tile consists of an image and optionally a border and a label. <width> is the size in pixels of each individual tile in the horizontal direction and <height> is the size in the vertical direction. Each tile must have an equal number of pixels in width and equal in height. However, the width can differ from the height. <x offset> is the offset in number of pixels from the vertical edge of the composite image where the first tile of a row begins and <y offset> is the offset from the horizontal edge where the first tile of a column begins.

If this keyword is specified, a directory of tile names must follow the image header. The format of the directory is explained below.

**packets**=value

the number of compressed color packets in the image data section. This keyword is optional for **RunlengthEncoded** images, mandatory for **Zip** images, and not used for uncompressed image.

**page**= value""

preferred size and location of an image canvas.

**display(1), animate(1), import(1), montage(1), mogrify(1), convert(1), more(1), compress(1)**

## **COPYRIGHT**

Copyright 1998 E. I. du Pont de Nemours and Company

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files ("ImageMagick"), to deal in ImageMagick without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of ImageMagick, and to permit persons to whom the ImageMagick is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of ImageMagick.

The software is provided "as is", without warranty of any kind, express or implied, including but not limited to the warranties of merchantability, fitness for a particular purpose and noninfringement. In no event shall E. I. du Pont de Nemours and Company be liable for any claim, damages or other liability, whether in an action of contract, tort or otherwise, arising from, out of or in connection with ImageMagick or the use or other dealings in ImageMagick.

Except as contained in this notice, the name of the E. I. du Pont de Nemours and Company shall not be used in advertising or otherwise to promote the sale, use or other dealings in ImageMagick without prior written authorization from the E. I. du Pont de Nemours and Company.

## **AUTHORS**

John Cristy, E.I. du Pont de Nemours and Company Incorporated