NAME

import - capture some or all of an X server screen and save the image to a file.

SYNOPSIS

import [*options ...*] [*file*]

DESCRIPTION

import reads an image from any visible window on an X server and outputs it as an image file. You can capture a single window, the entire screen, or any rectangular portion of the screen. Use **display** (see **display(1)**) for redisplay, printing, editing, formatting, archiving, image processing, etc. of the captured image.

The target window can be specified by id, name, or may be selected by clicking the mouse in the desired window. If you press a button and then drag, a rectangle will form which expands and contracts as the mouse moves. To save the portion of the screen defined by the rectangle, just release the button. The keyboard bell is rung once at the beginning of the screen capture and twice when it completes.

EXAMPLES

To select an X window with the mouse and save it in the MIFF image format to a file titled window.miff, use:

```
import window.miff
```

To select an X window and save it in the Encapsulated Postscript format to include in another document, use:

```
import figure.eps
```

To capture the entire X server screen in the JPEG image format in a file titled root.jpeg, use:

```
import -window root root.jpeg
```

OPTIONS

import options can appear on the command line or in your X resources file (see **X(1)**). Options on the command line supersede values specified in your X resources file.

-border include image borders in the output image. **-colors** *value* preferred number of colors in the image.

The actual number of colors in the image may be less than your request, but never more. Note, this is a color reduction option. Images with less unique colors than specified with this option will have any duplicate or unused colors removed. Refer to **quantize(9)** for more details.

Note, options **-dither**, **-colorspace**, and **-treedepth** affect the color reduction algorithm.

-colorspace *value*

the type of colorspace: **GRAY**, **OHTA**, **RGB**, **Transparent**, **XYZ**, **YCbCr**, **YIQ**, **YPbPr**, **YUV**, or **CMYK**.

Color reduction, by default, takes place in the RGB color space. Empirical evidence suggests that distances in color spaces such as YUV or YIQ correspond to perceptual color differences more closely than do distances in RGB space. These color spaces may give better results when color reducing an image. Refer to **quantize(9)** for more details.

The **Transparent** color space behaves uniquely in that it preserves the matte channel of the image if it exists.

The **-colors** or **-monochrome** option is required for this option to take effect.

-comment *string*
annotate an image with a comment.

By default, each image is commented with its file name. Use this option to assign a specific comment to the image. Optionally you can include the image filename, type, width, height, or scene number by embedding special format characters. Embed **%f** for filename, **%d** for directory, **%e** for filename extention, **%t** for top of filename, **%m** for magick, **%w** for width, **%h** for height, **%s** for scene number, **%b** for file size, or **\n** for newline. For example,

```
-comment "%m:%f %wx%h"
```

produces an image comment of **MIFF:bird.miff 512x480** for an image titled **bird.miff** and whose width is 512 and height is 480.

If the first character of *string* is @, the image comment is read from a file titled by the remaining characters in the string.

-compress *type*
the type of image compression: *None*, *JPEG*, *LZW*, *RunlengthEncoded*, or *Zip*.

Specify **+compress** to store the binary image in an uncompressed format. The default is the compression type of the specified image file.

-crop *<width>{%}x<height>{%}{+-}<x offset>{+-}<y offset>*
preferred size and location of the cropped image. See **X(1)** for details about the geometry specification.

To specify a percentage width or height instead, append **%**. For example to crop the image by ten percent on all sides of the image, use **-crop 10%**.

Use cropping to crop a particular area of an image. Use **-crop 0x0** to remove edges that are the background color.

-delay *seconds*
pause before selecting target window.

This option is useful when you need time to ready the target window before it is captured to a file.

-density *<width>x<height>*
vertical and horizontal resolution in pixels of the image.

This option specifies an image density when decoding a Postscript or Portable Document page. The default is 72 pixels per inch in the horizontal and vertical direction. This option is used in concert with **-page**.

-descend
obtain image by descending window hierarchy.

-display *host:display[.screen]*
specifies the X server to contact; see **X(1)**.

-dispose *method*
GIF disposal method.

Here are the valid methods:

0 No disposal specified.
1 Do not dispose.
2 Restore to background color.
3 Restore to previous.

-dither apply Floyd/Steinberg error diffusion to the image.

The basic strategy of dithering is to trade intensity resolution for spatial resolution by averaging the intensities of several neighboring pixels. Images which suffer from severe contouring when reducing colors can be improved with this option.

The **-colors** option is required for dithering to take effect.

-frame include window manager frame.

-geometry *<width>{%}x<height>{%}{+-}<x offset>{+-}<y offset>{!}{<}{>}*
the width and height of the image.

By default, the width and height are maximum values. That is, the image is expanded or contracted to fit the width and height value while maintaining the aspect ratio of the image. Append an exclamation point to the geometry to force the image size to exactly the size you specify. For example, if you specify **640x480!** the image width is set to 640 pixels and height to 480. If only one factor is specified, both the width and height assume the value.

To specify a percentage width or height instead, append **%**. The image size is multiplied by the width and height percentages to obtain the final image dimensions. To increase the size of an image, use a value greater than 100 (e.g. 125%). To decrease an image's size, use a percentage less than 100.

Use **>** to change the dimensions of the image *only* if its size exceeds the geometry specification. **<** resizes the image *only* if its dimensions is less than the geometry specification. For example, if you specify **640x480>** and the image size is 512x512, the image size does not change. However, if the image is 1024x1024, it is resized to 640x480.

-interlace *type*
the type of interlacing scheme: **None**, **Line**, **Plane**, or **Partition**. The default is **None**.

This option is used to specify the type of interlacing scheme for raw image formats such as **RGB** or **YUV**. **No** means do not interlace (RGBRGBRGBRGBRGBRGB...), **Line** uses scanline interlacing (RRR...GGG...BBB...RRR...GGG...BBB...), and **Plane** uses plane interlacing (RRRRRR...GGGGGG...BBBBBB...). **Partition** is like plane except the different planes are saved to individual files (e.g. image.R, image.G, and image.B).

Use **Line**, or **Plane** to create an interlaced GIF or progressive JPEG image. **-label** *name* assign a label to an image.

Use this option to assign a specific label to the image. Optionally you can include the image filename, type, width, height, or scene number in the label by embedding special format characters. Embed **%f** for filename, **%d** for directory, **%e** for filename extention, **%t** for top of filename, **%m** for magick, **%w** for width, **%h** for height, or **%s** for scene number, **%b** for file size in kilobytes, or **\n** for newline. For example,

```
-label "%m:%f %wx%h"
```

produces an image label of **MIFF:bird.miff 512x480** for an image titled **bird.miff** and whose width is 512 and height is 480.

If the first character of *string* is @, the image label is read from a file titled by the remaining characters in the string.

When converting to Postscript, use this option to specify a header string to print above the image. Specify the label font with **-font**.

-monochrome
transform image to black and white.

-negate apply color inversion to image.

The red, green, and blue intensities of an image are negated. Use **+negate** to only negate the grayscale pixels of the image.

-page *<width>{%}x<height>{%}{+-}<x offset>{+-}<y offset>{!}{<}{>}*
preferred size and location of an image canvas.

Use this option to specify the dimensions of the Postscript page in dots per inch or a TEXT page in pixels. The choices for a Postscript page are:

Letter	612x 792
Tabloid	792x1224
Ledger	1224x 792
Legal	612x1008
Statement	396x 612
Executive	540x 720
A3	842x1190
A4	595x 842
A5	420x 595
B4	729x1032
B5	516x 729
Folio	612x 936
Quarto	610x 780
10x14	720x1008

For convenience you can specify the page size by media (e.g. A4, Ledger, etc.). Otherwise, **-page** behaves much like **-geometry** (e.g. -page letter+43+43>).

To position a GIF image, use -page *{+-}<x offset>{+-}<y offset>* (e.g. -page +100+200). For a Postscript page, the image is sized as in **-geometry** and positioned relative to the lower left hand corner of the page by *{+-}<x offset>{+-}<y offset>*. The default is to center the image within the page. If the image size exceeds the Postscript page, it is reduced to fit the page.

The default page dimensions for a TEXT image is 612x792.

This option is used in concert with **-density**.

-pointsize *value*
pointsize of the Postscript font.

-quality *value*
JPEG/MIFF/PNG compression level.

For the JPEG image format, quality is 0 (worst) to 100 (best). The default quality is 75.

Quality for the MIFF and PNG image format sets the amount of image compression (quality / 10)

and filter-type (quality % 10). Compression quality values range from 0 (worst) to 100 (best). If filter-type is 4 or less, the specified filter-type is used for all scanlines:

0: none
1: sub
2: up
3: average
4: Paeth

If filter-type is 5, adaptive filtering is used when quality is greater than 50 and the image does not have a color map, otherwise no filtering is used.

If filter-type is 6 or more, adaptive filtering with *minimum-sum-of-absolute-values* is used.

The default is quality is 75. Which means nearly the best compression with adaptive filtering.

For further information, see the PNG specification (RFC 2083), <http://www.w3.org/pub/WWW/TR>.

-rotate *degrees{<}{>}*
apply Paeth image rotation to the image.

Use **>** to rotate the image *only* if its width exceeds the height. **<** rotates the image *only* if its width is less than the height. For example, if you specify **-90>** and the image size is 480x640, the image is not rotated by the specified angle. However, if the image is 640x480, it is rotated by -90 degrees.

Empty triangles left over from rotating the image are filled with the color defined as **bordercolor** (class **borderColor**).

-scene *value*
image scene number.

-screen This option indicates that the GetImage request used to obtain the image should be done on the root window, rather than directly on the specified window. In this way, you can obtain pieces of other windows that overlap the specified window, and more importantly, you can capture menus or other popups that are independent windows but appear over the specified window.

-silent operate silently, i.e. don't ring any bells.

-transparency *color*
make this color transparent within the image.

-treedepth *value*
Normally, this integer value is zero or one. A zero or one tells **convert** to choose a optimal tree depth for the color reduction algorithm.

An optimal depth generally allows the best representation of the source image with the fastest computational speed and the least amount of memory. However, the default depth is inappropriate for some images. To assure the best representation, try values between 2 and 8 for this parameter. Refer to **quantize(9)** for more details.

The **-colors** option is required for this option to take effect.

-verbose
print detailed information about the image.

This information is printed: image scene number; image name; image size; the image class

(*DirectClass* or *PseudoClass*); the total number of unique colors; and the number of seconds to read and write the image.

-window *id*
select window with this id or name.

With this option you can specify the target window by id or name rather than using the mouse. Specify 'root' to select X's root window as the target window.

Options are processed in command line order. Any option you specify on the command line remains in effect until it is explicitly changed by specifying the option again with a different effect.

file specifies the image filename. If *file* is omitted, it defaults to **magick.ps**. The default image format is Postscript. To specify a particular image format, precede the filename with an image format name and a colon (i.e. gif:image) or specify the image type as the filename suffix (i.e. image.jpg). See **convert(1)** for a list of valid image formats.

Specify *file* as - for standard output. If *file* has the extension **.Z** or **.gz**, the file size is compressed using with **compress** or **gzip** respectively. Precede the image file name | to pipe to a system command. If *file* already exists, you will be prompted as to whether it should be overwritten.

ENVIRONMENT

display To get the default host, display number, and screen.

SEE ALSO

display(1), animate(1), montage(1), mogrify(1), convert(1), combine(1), xtp(1)

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