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**GRAFFIX** is a clipboard viewer that can save a displayed graphic image to a BMP, GIF, PCX, or TIF file, or text to an ASCII file.

In Windows, the entire screen can be captured to the clipboard at any time by pressing the PrtSc key, or just the currently active window by pressing Alt+PrtSc. Pressing PrtSc will also capture text to the clipboard from DOS applications running full-screen in character mode.

The entire clipboard image can be saved or it can be cropped by using the mouse to frame a rectangle before saving to disk. Text can also be converted to a bitmap and cropped.

While running minimized as an icon, GRAFFIX will pop up and display the clipboard whenever a capture occurs.

## **File Menu Item: Save as >> BMP**

Select this item from the File menu to save the contents of the clipboard to an uncompressed Windows Bitmap File having the filename extension BMP. Monochrome, 16-color, 256-color, and 24-bit TrueColor modes are supported.

If text is the currently-displayed clipboard format, it will be converted to a graphic image and saved as a monochrome BMP file.

## **File Menu Item: Save as >> GIF**

Select this item from the File menu to save the contents of the clipboard to a CompuServe Graphics Interchange Format file having the filename extension GIF. This format utilizes LZW compression, and supports Monochrome, 16-color and 256-color modes. GIF does not support 24-bit TrueColor modes.

If text is the currently-displayed clipboard format, it will be converted to a graphic image and saved as a monochrome GIF file.

## **File Menu Item: Save as >> PCX**

Select this item from the File menu to save the contents of the clipboard to a PC Paintbrush file having the filename extension PCX. Monochrome, 16-color, 256-color, and 24-bit TrueColor modes are supported.

If text is the currently-displayed clipboard format, it will be converted to a graphic image and saved as a monochrome PCX file.

## **File Menu Item: Save as >> TIF**

Select this item from the file menu to save the contents of the clipboard to a Tagged Image Format File having the filename extension TIF. Three different compression schemes are available: LZW, PackBits, and no compression, any of which may be selected from the Options menu. The defaults are LZW for 24-bit TrueColor images, and PackBits for monochrome and palette color images.

## **File Menu Item: Save as >> TXT**

Select this item from the File menu to save clipboard text to an ASCII TXT file. Select OEM for the DOS-compatible, IBM extended-ASCII character set, or ANSI for the Windows-compatible character set.

If you select a file that already exists, clipboard text will be appended to that file.

## Cropping the Clipboard Image

To mark a rectangular area for cropping, move the cursor to the top-left corner of the desired rectangle, depress the left mouse button, move the cursor to the lower-right corner and release. Repeat this procedure to erase the rectangle and draw a new one.

To save the cropped image, select the desired format from the File menu. To erase the rectangle, press Esc or click and release the left mouse button.

Only bitmapped images can be cropped. To crop text, it must first be converted to a monochrome bitmap by selecting "Save as BMP" from the File menu, then "Open BMP" to place the newly-created bitmap on the clipboard. In most cases, it would be more practical to save text to an ASCII file, then open that file in a word processor and edit the text before pasting it into an application.



## Options >> Eleven options are available.

Option: Capture rectangle.

Select this menu item to capture the current rectangle to the clipboard. You must first draw a rectangle with the mouse or by entering coordinates from the keyboard.

Option: Clear clipboard

Select this menu item to empty the clipboard. Both text and graphics will be discarded.

Option: Enter coordinates

Select this menu item to modify or draw a rectangle by entering its coordinates from the keyboard. The values that appear in the dialog box are those of the current rectangle, if one has been previously entered or drawn with the mouse. If there is no current rectangle, the values default to a rectangle that contains the entire client area of the GRAFFIX window. Coordinates may be entered that exceed the boundaries of this client area, and may include the entire image on the clipboard, up to a full screen.

The origin of the rectangle coordinates is the upper-left corner of the clipboard image. To erase the rectangle, press Esc or click the left mouse button.

Option: Invert colors

Select this menu item to invert the colors of the image on the clipboard, creating a negative image. The original colors can be restored by selecting this menu item again.

Option: Popup mode

This is the default mode of GRAFFIX. When hidden by another window or minimized to an icon, GRAFFIX will pop up onto the screen whenever text or graphics is captured to the clipboard. Select this menu item to turn popup mode off or back on again.

To return to the application that was interrupted when GRAFFIX popped up, click on that application's window or minimize GRAFFIX back to an icon.

Option: Reverse x-axis.

Select this menu item to reverse the horizontal axis of the clipboard image. This will result in a mirror image.

Option: Reverse y-axis.

Select this menu item to reverse the vertical axis of the clipboard image. The effect is the same as flipping a transparency over, top-to-bottom, and viewing it from the back. To simulate the effect of turning an image upside-down, it is necessary to reverse both the x and y axes.

Option: Stretch bitmap.

Select this menu item to stretch or compress the clipboard image along the horizontal and/or vertical axes.

Option: Text colors

This menu item allows you to choose the displayed colors of clipboard text. The choices are black-on-white (the default) and white-on-black.

Options: Text to bitmap.

Select this menu item to convert clipboard text to a bitmap image, so that it can be subjected to any of the transformation options and/or saved to disk in one of the graphical formats.

Option: TIF compression

This menu item allows you to select the compression scheme for TIF files. The choices are LZW, PackBits, and no compression. The defaults are LZW for 24-bit TrueColor images, and PackBits for monochrome and palette color images.

## **File Menu Item: Open BMP**

Select this item from the File menu to open a BMP file and place the image it contains on the clipboard. If a graphic image already exists on the clipboard, the entire contents of the clipboard will first be discarded.

## **Main Menu Item: Print**

Select this menu item to send clipboard text or graphics to the printer. Before printing begins, Windows will first present a dialog box that will allow you to select various options, such as resolution and intensity, then GRAFFIX will present a dialog box that will enable you to position the image on the page and stretch or compress it vertically and/or horizontally.

## **Main Menu Item: Display**

Select this menu item to choose which clipboard format to display. There are three possible formats.

### **Bitmap**

This is the format to display a graphic image,

### **OEM**

This is the format to display text in the DOS-compatible, IBM extended-ASCII character set.

### **ANSI**

This is the format to display text in the Windows-compatible character set.

## **GLOSSARY**

### **ANSI text**

The set of text characters used by Windows. Most of the alphanumeric characters and standard punctuation symbols in this set (ASCII codes 32 through 127) are equivalent to those in the OEM character set used by DOS. However, the extended portion of the ANSI character set (ASCII codes 0 through 31 and 128 through 255) are mapped to different characters and symbols than those of the OEM character set. ANSI stands for American National Standards Institute.

### **ASCII text**

A text file format in which each character or symbol is represented by a one-byte numeric code in the range 0 through 255. ASCII stands for American Standard Code for Information Interchange.

### **bitmap**

An array of bytes that encodes a graphic image. Each pixel is represented by 1 bit for monochrome, 4 bits for 16 color, 8 bits for 256 color, and 3 bytes (24 bits) for TrueColor graphics.

### **character mode**

The non-graphical screen mode used by many DOS applications to display text. Each character is represented by two bytes in memory, one for the ASCII code and one for the color attribute, and the displayed font is the same hardware font seen in DOS directory listings.

### **clipboard**

An area of memory allocated by Windows for the temporary storage of data. Applications can cut to or paste from the clipboard. The entire screen can be copied to the clipboard at any time by pressing the PrtSc key (Shift-PrtSc on 84-key keyboards), or just the currently active window by pressing Alt-PrtSc.

### **LZW compression**

A file-compression algorithm that encodes repetitious byte sequences as tokens stored in lookup tables to substantially reduce file size. LZW stands for Lempel, Ziv, & Welch.

### **monochrome bitmap**

A bitmap that has only two colors, usually black and white. Each pixel is represented in the bitmap by one bit, so that one byte can encode eight pixels.

GRAFFIX will display and save monochrome bitmaps if the Windows "VGA with Monochrome display" screen driver is running. This driver can also display Windows in monochrome on a color monitor.

### **OEM text**

The IBM extended-ASCII character set used by DOS. Most of the alphanumeric characters and standard punctuation symbols in this set (ASCII codes 32 through 127) are equivalent to those in the

ANSI character set used by Windows. However, the extended portion of the OEM character set (ASCII codes 0 through 31 and 128 through 255) are mapped to different characters and symbols than those of the ANSI character set. OEM stands for Original Equipment Manufacturer.

### **PackBits compression**

A run-length encoding scheme used to compress TIF files.

This is the default compression scheme for monochrome and palette color images. PackBits does not compress a file as densely as LZW, but is faster to write to and read from disk.

### **palette**

Each pixel in a palette color image is represented in a graphics file as an index into a 16 or 256 color palette. A palette color image cannot use a color that does not exist as an entry in the palette.

### **TrueColor**

A bitmap format that maps each pixel on the screen to three bytes in memory, one for each of the primary colors red, green, and blue. The number of possible colors that can be represented for each pixel is therefore 256 to the 3rd power, or 16,777,200 different colors. A Super-VGA monitor can display TrueColor graphics only if the proper Windows screen driver is running and the video adapter card supports that display mode.

