PixFolio Index
Commands
Catalog Menu
Edit Menu
File Menu
Option Menu
View Menu
Glossary
Defined Terms
Procedures
User Guide
Exiting
Other
Context Sensitive Topics
Credits

Credits

This program was developed by Allen C. Kempe (CompuServe Id 71220,23) with a major contribution by Paul Hachey (CompuServe Id 76247,3716) who designed the Icon, Cover screen and provided many ideas which influenced the look and feel of PixFolio and lent other invaluable assistance in the testing and development   stage.

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The Index contains a list of all Help topics available for the Help Example. For information on how to use Help, press F1 or choose Using Help from the Help menu.

Catalog Menu

The Catalog menu includes commands that enable you to maintain and view the contents of catalogs of images.

For more information, select the Catalog menu command name.

Select Catalog   Add, delete, rename or select a catalog.
Catalog   Catalog an image.; add, delete or update catalog entry.
Browse   Browse through a catalog and search for specified criteria.
Build   Build a catalog via mass update.
Rebuild Index Rebuild a catalog index & recover lost disk space due to deleted records.

Edit Menu

The Edit menu includes commands that enable you to manipulate images, access the Windows clipboard and undo a previous operation..

For more information, select the Edit menu command name.

<u>Copy</u>   Copies an image or selected area to the clipboard
<u>Cut</u>   Cuts an area from an image and places it in the clipboard.
<u>Crop</u>   Crops an image .
<u>Expand</u>   Expand the size of an image.
<u>Resize</u> Resize an image by a given percentage   or rotate or mirror the image.
<u>Palette</u>Paste a palette saved   on the clipboard.
<u>Paste</u>   Copies an image from the clipboard.
<u>Undo</u>   Undo the last edit operation.

File Menu

The File menu includes commands that enable you to open and save files,delete or move files, and to print.

For more information, select the File menu command name.

Open	Open a file.
Move	Move or copy a file.
Print	Print all or part of an image.
Select Printer	Select a printer
Save	Save a file and optionally convert to another format.
Delete	Delete a file.
Clear	Clear the screen.
Tech Info	Technical Information
Exit	Exit PixFolio

Option Menu

The   Option menu includes commands that enable you to set operating options.

For more information, select the Option menu command name.

Background   Set background color.
Solid Background   Select Solid or dithered background.
DIB   Paint screen with DIBs.
Display Warnings   Control Display of warning messages.
Default Options   Set program defaults options.
Fix TIFF   Fix TIFF files with invalid strip byte counts.

View Menu

The View menu includes commands that control how images are displayed.

For more information select the View menu command name.

Change Palette   Change palette.
Gray Palette   Gray palette.
Restore Palette   Restore palette.
Dither Image Convert image to dithered black and white.
Slide View   Display catalog as a "slide display".
Normal View   Destroy "slide display".
Play Image   "play" a GIF animation or GIF89a composite image.
Single Step Play Single step through a GIF animation.
Set Play Rate Vary the speed at which a GIF animation "plays".

Glossary
Bitmap
Clipboard
Color Resolution
Device Dependent Bitmap
Device Independent Bitmap
GIF

Edit Copy Command

To copy an image to the clipboard, select COPY on the Edit menu. The selection will be greyed if no image is being displayed.

In order to copy part of an image, first locate the cursor at one corner of the area that you wish to copy, hold down the left mouse button and stretch the box to encompass the desired area. Release the mouse button and then select COPY from the EDIT menu.

Edit Cut Command

EDIT-CUT works similar to EDIT_COPY except that it is only effective when an area has been selected using the mouse. When COPY is then selected from the EDIT menu, the area will be cutout and placed in the clipboard. The background where the image   was cut will be painted to the current background color. (See OPTION BACKGROUND).

Edit Paste Palette

This command can be used to replace the palette of the currently displayed image with the palette stored with the bitmap in the clipboard. Normally, data is pasted from the clipboard using the palette currently in use.

Edit Paste Command

If there is compatible data in the clipboard, it may be "pasted" by selecting the EDIT-PASTE command. You can   determine whether there is data in the clipboard by looking at the EDIT-PASTE menu entry. If it is "grayed", there is no compatible data in the clipboard.

Data to be pasted from the clipboard could have been put there by some other program, for example the Windows Paint program or by PixFolio itself,   earlier.

To paste data from the clipboard, select EDIT_PASTE. The cursor will then change from an arrow to a crosshair. Move the crosshair cursor to the upper left corner of where you want to place the clipboard data.

When you are at the desired location, press the left mouse button and hold it down. While it is down, a box of the same dimensions as the clipboard data will be displayed. When the box is located where you desire, release the left mouse button and the clipboard data will be written to the screen at the location of the box.

Edit Expand does not alter the aspect ratio of the image, this can be done with <u>Edit Resize</u>.

Edit Expand

This command can be used to expand the area of an image so that additional images can be pasted together to form a larger image. Alternatively, an image can be cropped.

To change the size of an image, use the mouse to drag the window borders to the   desired. size. Then select   EDIT-EXPAND.   If the new borders are inside the old borders, the image will be cropped, otherwise it will be expanded. Edit Expand does not alter the aspect ratio of the image, this can be done with Edit Resize.

The expanded area of the image will be colored to the Background color. (see OPTIONS-BACKGROUND).

Edit Resize

Use this option when you wish to resize an image (make larger or smaller) by a specific amount. You will be presented with a dialog box with two values to be inputted, one for the X (width) dimension percentage and the other for the Y (height) dimension. The default value for both is 100 (%). Accompanying each percentage input box is an alternative pixel size edit box which can be used as an alternative to the percentage change. Any change entered into the size box will be automatically reflected in the pixel size and vice-versa.

The height can be changed independently of the width and vice-versa allowing an image to be "stretched" one way or the other. For example to increase the width by 50%, type in 150 for the X dimension percentage and leave the Y at 100%. For best results, the increased or decreased image should be some multiple of the original, otherwise the image will be distorted.

Flipping an Image

Two check boxes allow for reversing the image along the X axis (left - right) or along the Y axis (top - bottom) or along both. If the X mirror checkbox is checked, the image will be reversed left to right and if the Y mirror checkbox is checked the image will be flipped top to bottom. Flipping along both axes is equivalent to rotating 180°.

Rotating an Image

Rotation can be specified along with flipping or resizing. In the Rotate group box are four radio buttons, "none", "90°", "180°" or "-90°". If rotation is specified, the image will be rotated first and then the flipping and/or resizing will be done.

Edit Crop

This command may be selected to crop the image to the dimensions of the current selection rectangle or the window borders.   The selection rectangle can be drawn by holding the left mouse button down at the upper left-hand corner of the area that you want to enclose and then dragging the mouse to stretch   the rectangle out. When you release the mouse button, the rectangle will stay on the screen and EDIT CROP can be selected to crop the image to the size of the rectangle.

Edit Undo

Sometimes it may be desirable to "undo" the previous edit operation if the result is not what was desired.

PixFolio saves the current image before performing any operation on it so it is possible to back up by selecting EDIT-UNDO..

Note: The undo buffer is only one deep. *You can only undo the last operation.* It would be wise to save your file at critical steps if necessary.

File Open Command

Select this command to read and open a new image for viewing. If the file is cataloged, the CATALOG-BROWSE command may also be used to open a file.

PixFolio will automatically   specify a list of extensions to search for. This default extension list is loaded from WIN.INI whenever PixFolio starts up; different file extension lists can be established for each catalog. If you do not want to default to certain file extensions, the entry "Extensions=" under [PixFolio] in the WIN.INI file and for each catalog in the Catalog Select command may be changed to suit your requirements. A valid file extension list is of the form "*.xxx; *.yyy;" etc. Note that each extension is separated by a semicolon ";".

File Print Command

Select this command to print the currently displayed image. A portion of the image only may be printed by first using the mouse   to (see Copy) select a rectangular area to print.

If your printer does not support printing of gray scale or color images, you may wish to convert the image to a dithered B/W image using the   View Dither Image command prior to printing.

Note: Printing takes a long time. Printing once initiated, can be cancelled by pressing "Cancel" in the dialog box that is displayed while printing is taking place. Or a print job can be cancelled via the Print Manager.

File Select Printer

This command can be used to select which printer you wish to use for a subsequent print command. Depending upon the printer, you may also be able to set various printer options such as portrait or landscape mode.

File Save Command

Select this command to save an image or create a new copy of an image in a different format.

FILE_SAVE defaults to the current filename. If you wish to change the name and/or directory, you may do so. The extension used will determine the file format .Alternatively,   by pressing the "format"   button, the dialog box will expand and   display a number of radio buttons that can be used to select the desired format and color resolution of the output file.

Graphic Formats:

Graphic formats supported by PixFolio are:
GIF   CompuServe Graphics Interchange Format. PixFolio   supports both the GIF87a and GIF89a standard. ("The Graphics Interchange Format (C) is the Copyright property of CompuServe Incorporated. GIF(sm) is a Service Mark Property of CompuServe , Incorporated.")
PCX   Z-Soft Paintbrush files.
TIFF   Tagged Image format.
BMP   Windows bitmap format.
RLE   Windows Run Length Encoded file format.
IFF   Deluxe Paint II LBM & IFF files. The file extension "CE" is created by Digital Vision's Computer eyes video capture product.
TGA   Targa file format.   (TrueVision Advanced Raster Graphics Array)

Color Resolution Formats

Images can be saved in   several resolutions:
1 BPP I bit per pixel or two colors, black & white.
4 BPP 4 bits per pixel or 16 colors.
8 BPP 8 bits per pixel or 256 colors.
24 BPP 24 bits per pixel or 16 million colors.

The Color resolution selected will determine the maximum number of colors in the saved image. If this is less than the current resolution of the image then the current colors will be converted to the nearest color available in the reduced resolution.

Not all file format and color resolution combinations   are valid either because the combination is not supported or because the format specification does not provide for it. Invalid color resolution options will be "grayed" and cannot be selected.

GIF animation and GIF89a features cannot be saved. In this case what will be saved is the image that is displayed when File Save is invoked.

File Compression

Although most of the file formats supported provide for compressing the pixel data, PixFolio currently only supports compression for   GIF, PCX , TARGA & RLE and TIFF files. PCX, TIFF and TARGA files   can be saved   in either compressed or non-compressed format. The GIF format is always compressed. When PCX , TIFF or TARGA is chosen, a check box will be displayed.; if checked, the file will be compressed otherwise it will be written uncompressed.

Although the format specification provides for several types of compression to be used for TIFF files, PixFolio only writes files with Packbits compression for 2 color images and LZW encoding for 16 colors or greater images.

File Delete Command

Selecting this command will cause the currently displayed image to be deleted from its location on disk. If the file is present in the currently selected catalog, it will be deleted from there as well. FILE_DELETE will not deleted catalog entries from other than the current catalog.

File Move/Copy Command

This command may be selected to move or copy the currently displayed file to another location.   For example, to organize your files or to create a backup copy. The change of location will be updated to the catalog.

Move/Copy does not change the file's format. It simply copies the disk   data from one location to another.   "Move" implies that the original file will be deleted after copying. To copy, that is to say, end up with two copies of the file, select the Copy option checkbox.

If the file is located in the currently selected catalog, the catalog entry will be updated to reflect the new location of the file. If doing a move or copy and the file is renamed, the catalog entry will also be renamed.

File Clear Command

This command will close a file without exiting PixFolio. The screen will be erased of the current image.

File Tech Info Command

If an image is currently displayed, this option will display a dialog box that contains a scrollable window that lists various technical attributes of the file. Also, if any errors were encountered while reading the file, they will be displayed here.

The technical attributes of a file format may be significant when attempting to which determine specific format options are used. For example, if the file is compressed, it will be displayed here. PixFolio does not support all permutations of format options for all files and of course is unaware of new options that might be added to a format specification in the future.

The format and content of the display is dependent upon the file format; some formats may display more information than others.

File Exit Command

Use this command to exit PixFolio.

File Main Command

Use this command to close a view   window; the image will subsequently be displayed in the main window.

Catalog Select Catalog Command

This command will cause a dialog box to be displayed that will enable you to select, add, delete or change the name of a catalog.

A catalog has a "Title" which can be anything that you wish it to be. It could be descriptive of the type of images, e.g. "GIF 640x480" or relating to a topic, e.g. "Nature". Each catalog has a DOS file name and path associated with it.   This path will also be the default path for files in that catalog.   Another   property associated with a catalog is the default extensions for files that will be displayed in the File Open and Catalog Build dialogs.

The first time that   PixFolio   starts up, it will create a catalog titled "Default" and named "PIXFOLIO.CAT (its corresponding index is PIXFOLIO.CIX). The default catalog and its index will be located in the same directory as PIXFOLIO.EXE.

You may establish as many catalogs as you wish. The names of defined catalogs and their pathnames   are saved in WIN.INI.

Select New Catalog
PixFolio can only work with one catalog at a time. This requires you to "select" which of the catalogs that you have defined. Until you change the selection, this is the catalog that will be updated by any subsequent catalog commands.

To select a catalog, highlight the desired catalog in the Catalog combo box. Make sure that the "Select New Catalog" radio button is checked and press "OK".

Change Catalog Title / Ext
Highlight the catalog whose title you wish to change. You may also change the list of file extensions that will be displayed in the File Open and Catalog Build functions while this catalog is selected. Then check the "Change Catalog Title". Next, enter the new name in the Catalog Title edit box. Then press "OK".

When a new catalog is selected, the current directory will be set to that of the Catalog's file name.

Note: changes to the default extensions for a catalog will not be effective until that catalog is selected again.

Delete Catalog
Highlight the title of the catalog you wish to delete.   Then check the "Delete Catalog" radio button. Then press "OK".

Create New Catalog
Press the "Create New Catalog" radio Button, fill in the title of the catalog in the New Title edit box. Next, enter a filename for the catalog. An extension is not necessary! Use the file list box to select a path to where the catalog should be placed , enter a list of file extensions to be in effect for this catalog and then press "OK".

Note: It is suggested that the catalog be placed in the directory where the majority of the files that will be cataloged in this catalog because selecting the catalog will set the current directory to that of the catalog file name.

Default Catalog

The default catalog, that is to say, the catalog that will be selected upon startup, is definable

via the Option Default Options command.

Catalog Catalog Command

This command can only be executed when an image is being displayed.   This command is used to add or update an entry in a selected catalog. The previously selected catalog will be used but can be changed by selecting a new catalog with the Catalog combo box.

Selecting this option will bring up a dialog box with a number of fields that you can enter into. Other fields are updated by the program.

User Fields
Title   This is the title of the image.If a GIF89a image has a title, it will be filled in
        automatically. The maximum number of characters that can be entered is 59,
        including carriage returns and line feeds.
Keywords This field can contain a   number, up to the length of the entry box, of keywords
        to be used for searching. These keywords can be used to select   a list of files
        meeting requested search criteria. The maximum number of characters that can be
        entered is 87.
Description This field can be used to enter any descriptive data concerning the file up to a
        limit of 1200 characters. This field can be scrolled and edited using standard editing
        commands. If a GIF89a image has text data included with it, it will be placed here.

Program Fields:
Filename The name of the file.
Icon   This is a postage size view of the image. Clicking on the image will cause it to be
        regenerated.
Pathname The primary location (hard disk) pathname and volume label are displayed as well
        as the backup(floppy disk) location. Therefore, there can be two access paths for the
        file.
Info   The height, width , number of color bits and file format are displayed in a box in the
        lower left corner.

There are several functions which can be performed by pressing the following buttons:
Catalog/Update Update the catalog; "Catalog" means that this is a new entry. If desired, the
        target catalog can be changed beforehand.
Uncatalog   Delete the catalog entry. This button will be grayed if there is no catalog entry to
        delete. This option does not delete the file itself.
Cancel   Cancels the dialog and returns you to the main menu.
Move   Moves the file to some other location.
(image)   The "postage stamp" image is itself a button. When the original image is
displayed, clicking on the "postage Stamp" will cause it to be re-generated. this is useful if
you had previously cataloged the original image and now have made a change to it like
brightening it or cropping it.   In Browse mode, clicking on the image has no effect.

Note: The above buttons are redefined if the dialog is entered via the CATALOG_BUILD
command.; "Catalog" or "Update" becomes "Next",   Uncatalog becomes "Previous" and
"Move" becomes "View".

Catalog Browse Command

The CATALOG_BROWSE command provides a dialog box listing the files in a catalog. The target catalog can be changed by selecting another catalog from the Catalog combo listbox.

There are a number of functions that can be applied to a file:

<u>Move /Copy File</u> The file can be moved or copied to another location.
<u>Delete File</u> The file can be deleted from the hard disk. The file is also deleted from the catalog.
<u>View Image</u> The file can be opened and viewed.
<u>OK</u>   The catalog entry for the file can be viewed and updated. Double-clicking the file name is the same as pressing the OK button. When the catalog entry dialog is displayed, the OK , Delete and Move buttons are replaced by Prev, Next and View respectively.
<u>Cancel</u>   Cancels the dialog returning you back to the main viewing window.
<u>Uncatalog</u> Deletes the file from the catalog only.
<u>Print Cat</u> Prints the selected catalog entry.

File Search

Four   different search criteria can be applied to a catalog to restrict the catalog list to a subset. The four categories   that can be used for the search are:

1.   Whether a backup copy exists.
2.   File Format, e.g. GIF87a, TIFF, PCX, etc.
3.   Match on one or more keywords.
4.   Match on special conditions, e.g. file size, width, height, number of colors or backup volume name.

The Search   function can be accessed by pressing the Options >> button:

After a search operation.

To search, place the desired search value(s) in either the Format edit box   (29 characters max.), Special   Conditions (87 characters max) or the Keywords (87 characters max) edit box. If nothing is put   in a box, it will not be used in the search. The "Backup File" checkbox is a three-state control. If the box is gray, then it will have no affect on the search. If the box is blank, then all catalog records that do <u>not</u> have a backup location will be selected. If the box is checked, only those catalog records with a backup file location will be selected. The three search criteria are ANDed to select   a record. That is to say, if search criteria 1 (Backup) is satisfied AND search criteria 2 (File Format)   AND search criteria 3 (Special Conditions) AND search criteria 4 (keywords) are satisfied, the record will be selected.

Wildcard characters "*" & "?"   can be used in search arguments. For example, to select all "GIF" files, the search argument "GIF*" will select both GIF87a & GIF89a". Either spaces or Commas may be used to separate   search arguments. The underscore character "_" may be used in place of a space in a search argument if that space is significant. For example STAR_TREK will search for the string "Star Trek" while STAR TREK will hit on either "Star" or "Trek".

In order to include in the search special conditions such as file size, image width, etc, PixFolio has   5 special search arguments that can be used in the Format and Special

Conditions boxes. Do not use one of these special codes in the Keywords box! The special codes all start with an "@" sign followed by a Code for the particular value to be tested for, an operator ("<" - less than, "=" - equal . "#" - not equal, or ">" - greater than) , followed by the value to be tested for.

The valid codes are:

"B" - backup volume name.
"C" - number of colors, 2, 16, 256.
"D" - date in format mm-dd-yyyy
"H" - height of image.
"P" - primary path name
"S" - file size in bytes.
"W" - width of image.

Some examples:
@W=320   select images whose width is 320 pixels.
@D=01-01-1991 select all dates later than January 1, 1991.
@B=GIF0020 select all images residing on backup volume "GIF020"
@C>16   select all images with more than 16 colors.
@P=C:\PIXFOLIO   select all images in subdirectory "C:\PIXFOLIO"

The catalog will be searched for records meeting the desired criteria when the Search button is pushed. At the completion of the search, the new catalog list will be displayed in the listbox.   To change the search criteria, enter new search values and press Search again.

The modified catalog list will be in force until the "Show All" button is pressed, a new catalog is selected or another search operation is performed. The VIEW SLIDE VIEW command will only display the currently selected catalog entries.

Catalog Build Command

This command   provides the ability to select   one or more files from a specified input directory for automatic updating to the catalog.

All files in the directory can be selected by clicking on the "Select All" check box.; all files will be highlighted. Any files that are not desired can be deselected by clicking on the file name. Clicking on the "Select All" box a second time will un-highlight all files.

All highlighted files will be cataloged if they are not already. PixFolio will not bother to read images into memory that are already cataloged. However, file volume and pathname information will be updated for existing catalog records. This feature provides an easy way to update PixFolio with information on backup copies of images stored on your hard disk. Just do a "Build" on the floppy disk in drive A or B and the backup location of the files will be quickly updated to the catalog. Another use for the "Build" command is to update the catalog to reflect the new locations of files on your hard disk after you have moved them outside of PixFolio.

 If the "Auto Update" option is selected. all of the files will be cataloged without any intervention; otherwise you will be prompted for each file so that you may fill in the Title, Keywords and Description entries. The Auto Update option is useful for mass updates or for initial creation of a catalog.

PixFolio may halt for certain errors and warnings if the <u>Option Display Warnings</u> menu selection is checked.   You may temporarily enable or disable this feature by checking the "Stop on Error" checkbox.   You may also change the default setting via the Option Default Options command. This will prevent stopping the build process except for the most serious errors. Please keep in mind that processing 24 bit images may cause your computer to appear to "hang" while Windows processes the bitmaps.

The catalog that will be updated can be selected by using the Catalog Combo listbox.

Catalog Print Catalog

This command will print, one per page, the contents of each catalog entry in the currently selected catalog. The printed entry contains the "thumbnail" view of the image as well as text information such as title, description, keywords, image size, color resolution, file size, date, etc.

To print a single catalog entry, you can use the "Print Cat" button in the <u>Catalog Browse</u> command.

Catalog Rebuild Index Command

This command should be used when it is necessary to recover lost disk space in a catalog. This may be necessary after doing a lot of maintenance to catalog entries, particularly editing and adding to descriptions. When the catalog record is re-written, the space previously allocated in the file for the record   is not used and either a previously deleted record that is large enough is used or the file must be expanded.

CATALOG-REBUILD   re-writes the catalog   and eliminates any deleted records resulting in a smaller catalog file and index.

It is suggested that a backup of the catalog be made before CATALOG -REBUILD is executed.

Note: The Catalog Rebuild Command creates temporary work files that have names starting with ~PXCnnnn.TMP and ~PXInnnn.TMP wher "nnnn" is some random number. These files are the newly created catalog and index respectively. In the event that the Catalog Rebuild should fail, these files may be left on your hard disk and taking up considerable space. Normally, they would be deleted when the function ends. The files will be written on which ever hard drive on your system which has the most free space.

Options Background Command

This command can be used to select a background color to be used   when an image is resized with the EDIT_EXPAND command. It presents a dialog box that can be used to establish a custom color.

The default background color when PixFolio starts is Green. The background color may change due to reading in   an image that specifies a background color. GIF files do specify a background color.

The background colors that can be selected will be one of the colors in the image's palette.

Options Solid Color Command

If this option is checked, the background will be written with a solid color. Otherwise, a dithered color will be used.

Options DIB To Screen

This option controls the way that PixFolio displays images. If this option is checked, the screen will be painted directly using the current Device Independent Bitmap (DIB) rather than a device dependent bitmap (DDB).   Displaying a DIB is slower than displaying a device dependent bitmap. However, the downside is that there could be a lengthy delay, especially when 24 bit color images are read in, while the device dependent bitmap is being created.

Options Display Warnings

This option toggles on or off an option to suppress the display of certain warning messages. Once you have experience with PixFolio, you may wish to turn this option off.

Any change to this option affects only your current session of PixFolio. The default value upon startup can be set via the Option Default Options command.

Options Default Options

This command displays a dialog box enabling you to establish startup options that take effect when Pixfolio is started up. The options that can be set are:

1.   Default Catalog, the initial catalog that will be selected.

2.   Default   file extension list that will be used to set up the corresponding option in the Select Catalog function when a catalog is created. An extension file list is a series of wildcard file specifications. Multiple selections can be made; each selection must be separated by a semicolon ";". An example is: **"*.GIF; *.TGA"** to display GIF and Targa files.

3.   The default subdirectory that will be in effect initially. Once a new catalog is selected, the current directory will be set to that of the catalog. If this option is not specified, the initial subdirectory will be that of the default catalog.

4.   Warning messages are to be displayed. Warning messages for the *session only* can be changed via the Options Display Warnings command.

5.   Background type is to be a solid color or a dithered color.

6.   Center Image option.

Options Fix Tiff

Certain TIFF files have been found which do not adhere to the TIFF standard. These files do not have the correct strip byte counts. Without this option turned on (this is the default), these files will fail. Inspection of Tech Info will reveal the message "Check Tiff: bad offsets."

If you get the above error when reading a TIFF file, you may be able to read the file by turning this option on. If the file reads successfully, it is suggested that you save the file with PixFolio. PixFolio will write the file in the correct format so that it can be read later with no problems.

The files affected by this option are files created by a conversion program "BLKTOTIF.EXE which converts Fontasia block files to TIFF format.

WARNING: This option should remain off when reading a TIFF file unless the file has failed to load with the "bad offsets" error. With this option turned on, legal TIFF files may fail to load properly.

View Change Palette

This command allows you to adjust   the brightness and/or the contrast of an image. Which option is selected is determined by the state of the two radio buttons labelled "Brightness" and "Contrast.".

The brightness has a range of -200 to +200 and the contrast has a range of -10 to +10.   A positive value for brightness will brighten the image, a negative value will darken it. Increasing the brightness will make all of the colors brighter by an equal amount.

Contrast on the other hand alters the brightness of colors unequally. A positive value for contrast will increase the contrast while a negative value will decrease the contrast.
If you have an image with a very dark background, an adjustment of the contrast, say by -2, may be in order. Once details in the dark areas become discernable, the brightness may be increased.

Making contrast and brightness adjustments can result in a loss of image detail. You should be aware of this when attempting to find the right adjustment to make. You should avoid making an adjustment and then backing up. For example, adjusting the brightness by 100 and then backing up by -50 will result in loss of detail for the brighter colors, resulting in a "posterized" image. If you try an adjustment that is too much, restore the palette using the Restore Palette command   and then adjust the brightness or contrast again using a smaller value.

Although a brightness and contrast adjustment cannot be made concurrently, it is permissible to, for example, to make an adjustment to the contrast and then follow with an adjustment to the contrast.

This command is enabled only if your video driver supports a palette. The VGA driver shipped with Windows does not support palettes.

The original palette can be restored with the VIEW RESTORE PALETTE. (Unless it is a 24 bit color image).

Note: 24 bit color images do not have a palette so invoking this command while displaying a 24 bit color or gray scale image   requires that   all of the RGB   values in the image must be changed and new bitmaps rebuilt. This can take quite a while if your video driver does not directly support 24 bit color. It is suggested that 24 bit color images be saved as 8 bit (256 color) images first. PixFolio and Windows can process 8 bit color images much faster and if your video display only supports 8 bit color, you will not lose much picture resolution.

The huge memory requirements of a 24 bit color image preclude saving a copy of it so that it can be restored so the VIEW RESTORE PALETTE function is not available for 24 bit images.

View Gray Palette

This Command converts a color image to a gray-scale image.

Conversion of 24 bit color images can be lengthy. See VIEW CHANGE_PALETTE.

The original palette can be restored with the VIEW RESTORE PALETTE.(unless it is a 24 bit color or gray scale image).

View Restore Palette

This command restores the original   Palette that you had before doing a VIEW CHANGE PALETTE   or VIEW GRAY PALETTE command.

This command is enabled only if your video driver supports a palette. The VGA driver shipped with Windows does not support palettes. Because of the huge memory requirements,   this command is not available for 24 bit color or gray-scale images.

Important: Because Windows remaps the colors in an image whenever a new bitmap is created, the palette cannot be restored if any editing of the image has taken place. This includes rotating and resizing the image as well as the crop and expand image commands. If you need to adjust the palette and also do any editing to your image, do the editing first and the palette adjustment last.

This command restores the original palette from before   VIEW_CHANGE PALETTE was run.

View Dither Image

This command converts the currently displayed image to a Black and white dithered format. This format is suitable for printing on printers that cannot print gray-scale or color images.

Dithering replaces various shades of gray with patterns of pixels which approximate the shade of gray.

View Slide View

This command will display a series of small "thumbnail" images in the currently selected catalog, side by side . The number of catalog entries displayed depends upon the size of the current viewing area.; the maximum number of slides can be displayed by maximizing the window. Also, the sizing border of the window can be moved to increase or decrease the viewing area.

The content of the display can be modified by utilizing the <u>CATALOG BROWSE</u> , Search operation to limit the catalog list to desired entries. See also Slide View Options.

Slide View Options

Slides displayed can be viewed by clicking the mouse on them. Holding the left mouse button down while over a slide will display a popup menu with five options, VIEW, INFO,HIDE SLIDE, MARK SLIDE and RECATALOG SLIDE.

"View" will read in and display the image.
"Info" displays a dialog box with text information such as title, description, etc.
"Hide Slide" will delete the slide from the screen just as if it were not selected. Hidden slides can be restored by using the Catalog Browse command.
"Mark Slide" sets a flag for a later Recatalog option to act upon.
The Recatalog option can be used to move act on marked slides by uncataloging them. moving them to another catalog or copying the catalog entry to another catalog..

Individual slides can be moved around the screen by holding the left mouse button on the title and dragging the slide to the desired location.

Keyboard control

The Page-Up and Page down keys will scroll the slide display through the catalog list.

The Up-arrow and down arrow will move the display up or down one line respectively.

Selecting VIEW-SLIDE VIEW will cause any currently displayed image in the main viewing area to be erased.

Mark Slide

Selecting this option will "mark" the slide for later action using the Recatalog Slides command. When a slide is so marked, the Mark Slide menu item will be checked. Selecting a previously marked slide will unmark it.

Recatalog Slides

This option may be selected to either move marked slides' catalog entries to another catalog, copy the entries to another catalog or uncatalog the entries. When you select this option, you will be presented with a dialog box from which to select the target catalog for the move and copy options.

The slides to be uncataloged, moved or copied must be previously marked with the Mark Slide command.

View Normal View

Selecting VIEW-NORMAL VIEW causes the slide display produced by VIEW_SLIDE VIEW to be destroyed. The main viewing window is erased to a gray background .

The VIEW-NORMAL VIEW command will be grayed if there are no slides being displayed.

View Play Image

This   command when selected will "replay"   a GIF87a animation or a GIF89a composite image. This command is only enabled if such an image was read.

GIF animations consist of a series of images that are displayed one by one in succession . The <u>Single Step</u> command can be used to step through an animation and the <u>Set Play Rate</u> command can be used to set the speed of the animation.

View Single Step Play

This menu option will toggle an option to either single step through a GIF animation sequence or play the sequence normally. When the menu is checked, GIF animation sequences will be played one frame at a time.   To proceed to the next frame, double click the mouse in the window where the image is displayed or press any key.

View Set Play Rate

This command can be used to vary the delay time between successive frames in a GIF87a animation sequence. The time is entered in 1 thousandths of a second (milliseconds). A larger delay will slow down an animation sequence. The default   setting is 100 milliseconds.

Note: This command only affects GIF87a animations. The delay between frames for GIF89a animations is defined within the GIF image itself by the creator of the image.

Context Sensitive Topics

This Help system includes topics that you can call directly from the PixFolio sample application. To get context-sensitive help from PixFolio, press Shift+F1 and click on any element of the PixFolio application window. You can also highlight any PixFolio menu command using the keyboard and press F1 to get help on the command.

Exit PixFolio

Several methods may be utilized to exit PixFolio.
      1.. Select   CLOSE from the system menu or double-click on the system menu icon.
      2.   Select EXIT from the FILE menu   or press ALT-F4
      3.   Select CLOSE from the FILE menu. However, if an image is currently being
viewed   from   the slide layout screen, only that image will be closed.

Edit Window

When displaying an image in the Edit window, the mouse may be used to select an area for subsequently copying or cutting to the clipboard or to select and stretch a portion of the image.

Maximize Icon

Press this icon to make the screen the maximum size. This may be desirable before
executing the VIEW-LAYOUT SLIDES option.

Minimize Icon

This icon may be pressed to reduce the screen to an icon. The icon may be selected later to restart PixFolio where you left it.

Sizing Border

The size of the image displayed may be altered by dragging the mouse on the sizing border to make the window larger or smaller. The image's size can be permanently changed to the new size by use of the EDIT-EXPAND function.

If slides are currently being displayed as a result of the VIEW-LAYOUT   SLIDES command, the number of visible slide windows will be increased or decreased in accordance with the new area of the window.

System Menu

The   system menu can be used to exit (close) PixFolio or to move the window (move).

Title Bar

The title bar will contain (if an image is currently displayed, the filename, size and color resolution of the image.

Windows Keys

Choose from the following list to review the keys used in Windows:

Cursor Movement Keys
Dialog Box Keys
Editing Keys
Help Keys
Menu Keys
System Keys
Text Selection Keys
Window Keys

PixFolio Keys   Keys defined by PixFolio.

Cursor Movement Keys

Key(s)	Function
DIRECTION key	Moves the cursor left, right, up, or down in a field.
End or Ctrl+Right Arrow	Moves to the end of a field.
Home or CTRL+Left Arrow	Moves to the beginning of a field.
PAGE UP or PAGE DOWN	Moves up or down in a field, one screen at a time.

Dialog Box Keys

Key(s)	Function
TAB	Moves from field to field (left to right and top to bottom).
SHIFT+TAB	Moves from field to field in reverse order.
ALT+letter	Moves to the option or group whose underlined letter matches the one you type.
DIRECTION key	Moves from option to option within a group of options.
ENTER	Executes a command button.
	Or, chooses the selected item in a list box and executes the command.
ESC	Closes a dialog box without completing the command. (Same as Cancel)
ALT+DOWN ARROW	Opens a drop-down list box.
ALT+UP or DOWN ARROW	Selects item in a drop-down list box.
SPACEBAR	Cancels a selection in a list box.
	Selects or clears a check box.
CTRL+SLASH	Selects all the items in a list box.
CTRL+BACKSLASH	Cancels all selections except the current selection.
SHIFT+ DIRECTION key	Extends selection in a text box.
SHIFT+ HOME	Extends selection to first character in a text box.
SHIFT+ END	Extends selection to last character in a text box

Editing Keys

Key(s)	Function
Backspace	Deletes the character to the left of the cursor.
	Or, deletes selected text.
Delete	Deletes the character to the right of the cursor.
	Or, deletes selected text.

Help Keys

Key(s)	Function
F1	Gets Help and displays the Help Index for the application. If the Help window is already open, pressing F1 displays the "Using Windows Help" topics.
	In some Windows applications, pressing F1 displays a Help topic on the selected command, dialog box option, or system message.
SHIFT+F1	Changes the pointer to so you can get Help on a specific command, screen region, or key. You can then choose a command, click the screen region, or press a key or key combination you want to know more about.

(This feature is not available in all Windows applications.)

Menu Keys

Key(s)	Function
Alt	Selects the first menu on the menu bar.
Letter key	Chooses the menu, or menu item, whose underlined letter matches the one you type.
Alt+letter key	Pulls down the menu whose underlined letter matches the one you type.
LEFT or RIGHT ARROW	Moves among menus.
UP or DOWN ARROW	Moves among menu items.
Enter	Chooses the selected menu item.

System Keys

The following keys can be used from any window, regardless of the application you are using.

Key(s)	Function
Ctrl+Esc	Switches to the Task List.
Alt+Esc	Switches to the next application window or minimized icon, including full-screen programs.
Alt+TAB	Switches to the next application window, restoring applications that are running as icons.
Alt+PrtSc	Copies the entire screen to Clipboard.
Ctrl+F4	Closes the active window.
F1	Gets Help and displays the Help Index for the application. (See <u>Help Keys</u>)

Text Selection Keys

Key(s)	Function
SHIFT+LEFT or RIGHT ARROW	Selects text one character at a time to the left or right.
SHIFT+DOWN or UP	Selects one line of text up or down.
SHIFT+END	Selects text to the end of the line.
SHIFT+HOME	Selects text to the beginning of the line.
SHIFT+PAGE DOWN	Selects text down one window.
	Or, cancels the selection if the next window is already selected.
SHIFT+PAGE UP	Selects text up one window.
	Or, cancels the selection if the previous window is already selected.
CTRL+SHIFT+LEFT or RIGHT ARROW	Selects text to the next or previous word.
CTRL+SHIFT+UP or DOWN ARROW	Selects text to the beginning (UP ARROW) or end (DOWN ARROW) of the paragraph.
CTRL+SHIFT+END	Selects text to the end of the document.
CTRL+SHIFT+HOME	Selects text to the beginning of the document.

Window Keys

Key(s)	Function
ALT+SPACEBAR	Opens the Control menu for an application window.
ALT+Hyphen	Opens the Control menu for a document window.
Alt+F4	Closes a window.
Alt+Esc	Switches to the next application window or minimized icon, including full-screen programs.
Alt+TAB	Switches to the next application window, restoring applications that are running as icons.
Alt+ENTER	Switches a non-Windows application between running in a window and running full screen.
DIRECTION key	Moves a window when you have chosen Move from the Control menu.
	Or, changes the size of a window when you have chosen Size from the Control menu.

PixFolio Keys

Key(s)	Function
ESCAPE key	Can be used where ever a Cancel button is displayed.
CONTROL + INS	Copy to the clipboard. See <u>Edit Copy</u>.
SHIFT + DELETE	Cut a portion out of an image. See <u>Edit Cut</u>.
SHIFT + INSERT	Paste from the Clipboard to the current image. See <u>Edit Paste</u>.
SHIFT + F12 keys	Save an image. See Edit Save.
CONTROL + F12	Open image. See <u>File Open</u>.
CONTROL + SHIFT +F12	Print image. See <u>File Print.</u>
ALT + F4	Exit PixFolio.
BACKSPACE + ALT	Undo last edit operation. See <u>Edit Undo</u>.
CONTROL + "P"	"Play" a GIF animation sequence.

Clipboard

The Clipboard is used by PixFolio to transfer bitmap information to and from other applications that utilize compatible formats. PixFolio only supports standard Windows Clipboard formats (palette info, device dependent bitmaps and device independent bitmaps or DIB's.

The Cut or Copy commands transfer image data from PixFolio to the Clipboard. If a region is not selected by using the Mouse and the left mouse button, the entire image will be copied to the Clipboard.

The Paste command can be used to transfer a image or portion of an image in the clipboard to your current image. Selecting Paste will change the cursor to a crosshair. Then, while you hold the left mouse button down, a box whose dimensions are the same as the Clipboard data can be moved around until it is positioned properly. Releasing the left mouse button will allow the clipboard data to be displayed.

The Paste Palette command   can be used to replace the current palette with one from another image in the clipboard. When the Cut or Copy commands are used, a copy of the palette in use is also copied to the Clipboard. This palette can then be "pasted" just like the image except that   not being an entity in the physical sense, it is not necessary to position it.   While pasting a palette may be necessary in some instances, the use of this function is limited; the images must have a similar color map structure to avoid unwanted changes to the colors in the image.

Device Independent Bitmap (DIB)

Device Independent Bitmaps are a way of representing an image in a manner that is independent of the hardware upon which they are displayed.

DIB's are used to store images which must be displayed in a number of different environments. They contain all elements which might be needed by different display hardware. Windows BMP files are simply DIB's with a header tacked on.

Device Dependent Bitmap (DDB)

Device dependent Bitmaps are a way of representing an mage that is dependent upon the hardware characteristics of the display device. Windows uses DDBs internally. However, a DDB created for one device such as VGA   can only be used for VGA. For this reason, the DIB format is used when images must be transferred to another environment.

Color Resolution

Windows can handle four different color resolutions defined as bits per pixel or the number of bits used to describe the color.. 1 bit of color resolution can result in 2 colors, (usually Black or White). 4 bits will allow for 16 colors. 8 bits will allow for 256 colors. These are the most common values found in most images. Note that in order to display 256 colors, you must have a video board and Windows video driver capable of displaying 256 colors; the standard VGA driver can only display 16 colors.

Many images produced by scanners have 24 bit color resolution which is good for several million colors. Unless you have one of the newer graphics cards capable of displaying 24 bit color, 24 bit images will be displayed in 8 bit mode.

GIF

GIF stands for Graphics Interchange Format. It is a bitmapped graphics format introduced by CompuServe. "The Graphics Interchange Format (C) is the Copyright property of CompuServe Incorporated. GIF (sm) is a Service Mark property of CompuServe Incorporated".

There are two specifications for GIF images in use. The older of the two is the "GIF87a" format. Most GIF images adhere to this format. A newer file specification, "GIF89a" provides for additional features such as text and graphic overlays which can be timed or keyed to user input. PixFolio supports these features.

Bitmap

A bitmap in the general sense is an array of pixel (picture elements) . A bitmap to Windows , being a Graphical environment, is the basic element of the windows display just like a character is in an non-graphical environment. The windows display is made up of scores of bitmaps, large and small which make up different elements of the display. Bitmaps are used for such things as buttons, frames, title bars and also text.

The term Bitmap can also be used more specifically to refer to an image stored on disk. Commonly, these files have a .BMP extension. BMP files consist of a Windows bitmap along with some header information such as the size of the image, etc..

Cannot Open File xxxx...

If this file name was entered on the command line, you have probably made a mistake in entering the name. If this file was selected from the Open File dialog, this error could be caused by Window running out of file handles. In this case, check   your CONFIG.SYS file to insure that the entry FILES= is big enough. You may need to set it to 30   or greater depending upon how many applications you have running on your machine.

Unrecognized or invalid File Format

PixFolio cannot read the image. This could be caused by one of the following conditions:

The file extension is wrong. That is to say, it does not match the file's format. PixFolio assumes that the format, e.g.,"GIF" has a file extension of ".GIF".

The file has been corrupted. See <u>Options Fix TIFF</u> for a option to work around some errors in TIFF files.

The file format is not supported by PixFolio. Read the Tech Info to see if there are any messages detailing the format option giving the problem.

Windows has run out of memory.

Software bug in PixFolio.

Could not create BitmapFromDib

This message can occur when the DIB To Screen option is turned off and an error occurs creating the device dependent bitmap copy of the image. This can happen with very large images when you get low on memory. Program execution may continue but you may encounter other errors caused by low memory later, particularly when editing images or using the VIEW-LAYOUT SLIDES command.

Must be different path/filename xxxx...

The path/filename that you specified for the target file is the same as the input file. Either rename the file when you copy it or copy it to another directory or disk.

The operation will be terminated when you press OK.

Copy Failed/Move Failed

A copy or a move operation has failed, probably due to insufficient disk space. Either
free up disk space FY deleting or moving files or try some other target path for the operation.

The operation will be terminated when you press OK.

Duplicate File / File already exists at xxxx...

You are attempting to   catalog an image and the catalog already shows a file of the same name located in some other location on a hard drive. Only one hard drive location can be maintained for an image. You may choose to continue by pressing   OK or you may quit this operation by pressing Cancel.   If you choose to continue, the catalog will be changed to the new location.

Insert Disk / Insert Volume by in Drive x:

The Image that you are reading is located on a floppy disk whose   volume ID is by. Please insert the requested disk and press OK or press Cancel to abort the operation.

Incorrect Volume Label

This error occurs when trying to read a file from a floppy drive. The expected volume label is compared to the expected one. This error results if they differ. You may continue by pressing OK, retry by pressing Retry or cancel or abort the operation by pressing Cancel.

Rebuild Catalog Index / Are you ready to rebuild the index?

PixFolio is ready to rebuild the catalog index file. If you have not backed up the catalog, it may be prudent to do this first. To continue, press OK. To abort the rebuild, press Cancel.

Insufficient space to create xxxx.....

Prior to performing a   Move or Copy operation, PixFolio checks the output volume to see if there is enough space. This message results if there is not.

Your only operation is to press ok which will abort the operation. Then select another volume or location to move/copy to.

Overwrite existing file?

If PixFolio finds a file of the same name at the target location for a save or move/copy operation, you will be prompted with this message. If ok to continue, press OK, else press cancel to abort the operation.

Confirm Delete

If you do not wish to continue, press Cancel. Otherwise press OK to delete the file.

Warning! / This may take a while...

Displaying a 24 bit image may take quite a while. This warning is here to notify you that his will happen and you should not prematurely assume that your machine has "locked up".

Options:

Yes -   The screen will be painted "real time" so you can see it happen. This is the same as
          if   the DIB to Screen option   was turned on.

No-   The program will attempt to create a device dependent bitmap. Your machine will   "hang"
for quite a while.

Cancel- Quit processing this image completely.

In testing on a 20Mhz 386, bitmaps in the size of 640 x 480 took as much as 20 minutes to display.

The reason for this is that Windows must lookup each 3 byte RGB color triplet in your image and attempt to match it to one of the 256 colors (16 colors if you do not have a 256 color video driver) that it has available to display.

It is recommended that   once the image is displayed that   you save the image to some other 8 bit format such as GIF for later use. Also, you may wish to set the DIB to Screen option on. This will display the bitmap as it is being converted rather than after the entire bitmap has been processed.

Note: the same delay that you will experience here will apply whenever PixFolio has to manipulate the image such as during the various edit commands, stretching an image, or creating a the postage stamp image when cataloging an image or when part of the screen has to be repainted because another window invalidated part of it.

Note: This warning message can be inhibited by selecting the Display Warnings command.

Have patience!

xxx... has been modified / do you want to save it?

You have initiated some action that will erase the current image from the screen. but the image currently displayed has been changed. Do you want to save it before continuing?   Press the "Yes" button to save the image,   "no" to not save the image or "cancel" to abort the requested operation.

Empty Catalog / The selected catalog is empty...

The currently selected catalog is empty. This can happen if you have never cataloged any images; possibly you have just   created a new catalog or you are running PixFolio for the first time. Also, if the last Catalog Browse search command failed to find any images, this error could result.

To catalog an image, use File Open to read in an image, then select Catalog Catalog to catalog it; or - select the Catalog Build command to build a catalog.

New Catalog Created / Do you want to make xxx your current catalog?

The new   catalog has been created. Do you now wish to select this catalog as your active, current catalog? Enter "Yes" if ok, else, enter "NO"   to continue using the currently selected catalog.

Warning / xxx already exists, is it OK?

The filename that you have entered as the catalog file name already exists! Do not allow this name to be used unless you are sure that no other catalog name references it.

Verify Uncatalog / Do you want to uncatalog xxx...?

This message is presented when you have selected a catalog entry to be uncataloged. Press "YES" to continue, otherwise, "No".

Catalog xxx... not found

A catalog name entered on the command line when PixFolio was started is invalid. Check the command line to insure that the correct catalog name is given. PixFolio will use the default catalog (CATALOG1=) in your WIN.INI file.

Error /   Unable to create the specified file format

This error occurs when attempting to create a new bitmap with a different number of bits per pixel in order to save the file in a different format from what it was read as. The most likely cause is not enough memory to create the new bitmap.

Error / Unable to save the specified file

The save has failed. Two possible causes are insufficient disk storage space or a lack of memory.

This is an unregistered copy of PixFolio...

PixFolio is shareware. If you intend to use PixFolio beyond the 30 day trial period, you are expected to register your copy. Read the file "PIXREGST.ME" that came with your copy of PixFolio for details on how to register your own copy.

Confirm Delete / Do You wish to delete the slide from view?

If you answer "OK" the slide will be deleted from the view. To restore it, use the Catalog Browse command. Although the slide is deleted from the slide view, it is not deleted from the Catalog.

Error / Insufficient disk space!

When packing and rebuilding a catalog's index, you need enough space on an available hard drive to create work files containing the new catalog and index. PixFolio will search all available drives for the one with the most space. If no drives have enough space, equal to the current catalog files' size, this error results.

You must free up enough disk space by deleting files before you can retry to rebuild the index.

Catalog Error/An error has occurred while writing the catalog!

This error usually is caused by insufficient disk space to write a new catalog entry. The current operation will be   terminated when you press OK. To continue after this error, disk space will first have to be freed by deleting unneeded files or moving files to another drive.

The volume mounted in drive x: does not have a label.

The floppy volume mounted does not have a volume label. The lack of a volume label may make it difficult to locate this volume in the future.   PixFolio will keep the volume label as part of the catalog entry so that you can be prompted for the correct volume if you wish to view the file in the future. It is suggested that you press Cancel and use File Manager or some other program to label the disk before continuing.

To continue, press OK.

User Guide

Presented below are a number of topics of interest to PixFolio Users.

Overview

PixFolio is   designed to assist the user in managing a collection of graphics images so that they may be readily retrieved when desired.

Central to the purpose of PixFolio is the ability to read a variety of different graphics formats produced by many popular programs. Also of major value to users is the ability to convert images from one format to another.

The central theme to PixFolio is the concept of the "Catalog". A catalog is like a disk file directory in that it is an index to the file. But PixFolio catalogs go beyond being just a simple index. PixFolio allows the user to annotate catalog entries with his own comments. The user can supply keywords to a catalog entry   so that searches can be made to select images meeting the search criteria.

With graphics images taking up vast amounts of valuable and expensive disk space, it becomes necessary to keep images of them on removable floppy disk media. In many cases, only one or two images will fit on a floppy disk resulting in a modest sized graphics collection taking up dozens of diskettes. PixFolio is able to keep track of these "off-line" copies; they are referred to as "backup" copies even though in many cases, the floppy disk copy may be the only storage location. Therefore, when the user desires to view one of these copies, it is easy to locate the right diskette.

There are many programs available which allow extensive editing of images.While PixFolio possesses a number of editing tools that can be used to manipulate images in various ways, it's main purpose remains that of cataloging and keeping track of images. Even so, PixFolio possesses a basic set of editing tools that may satisfy most of the needs of users. Images can be rotated, resized, flipped about an axis, cropped and expanded.

PixFolio also supports the Windows Clipboard so that graphics formats not directly supported by PixFolio can be imported via the clipboard or PixFolio can export an image via the clipboard to another application.

Catalogs and Their Uses

Catalogs are in simplest terms, a list of images. The content and scope of a catalog is left to the user to define. For example, you may wish to catalog images by project or usage. Or you may wish to catalog images by size, color resolution, graphics format, content, etc. PixFolio can easily handle which ever way you want.

Catalog content does not necessarily have to be exclusive. A given image need   not be represented in one catalog; it can be located in more than one catalog at a time.

Creating a Catalog

PixFolio always maintains one catalog. However, the user may add as many catalogs as his or her system's disk storage will permit.

Before delving into the details of creating a catalog, it is worthwhile to explain a couple of attributes associated with a catalog.

Name   Each catalog defined in PixFolio has a name. The initial catalog created the first time that PixFolio is run has the name "Default". The name can be anything that is meaningful to the user. For example, you may name a catalog "GIF Images", "640x480", "Ajax Contract" or "Nature", relating to the content, format or use of the images that the catalog will maintain The name of a catalog can be changed at any time by the user.

File Name   The file name of a catalog again is user defined. Any filename can be used which is recognizable by DOS. PixFolio catalogs have filename extensions of "CAT" & "CIX" which cannot be changed by the user.   Also defined as part of the filename is the path; that is to say the disk drive and subdirectory where the catalog and it's associated index resides. It is suggested that the location of a catalog be in the same directory as the majority of the images contained in the catalog since the catalog's path also becomes the default path for accessing the images.

File extensions If a given catalog is to contain only certain graphics formats, the default file extensions for files displayed in the file open dialog can be defined for each catalog.

Each catalog defined in PixFolio is represented by an entry in the WIN.INI file. These entries are automatically maintained by PixFolio. The one case where the user might have to manually modify the WIN.INI file entry is if he or she wishes to move or rename a catalog filename.

The actual creation of a catalog is done via the Catalog Select Catalog command. When creating a new catalog, the user must supply a name for the catalog, a filename and path and a list of default file extensions.

Changing Catalog Attributes

The name of a previously defined catalog may be changed along with the default file extensions by using the Catalog Select command.

Deleting a Catalog

A catalog may be deleted by using the Catalog Select command. Deleting a catalog has no

affect on the images that were contained in the catalog.

Cataloging an Image

There are two methods which can be used to catalog an image. The first is the manual way by selecting Catalog Catalog command when an image is displayed. The second is to automatically update a catalog from a list of image filenames via the Catalog Build command.

The first method will probably be more convenient for cataloging images one at a time. Where many images must be cataloged, the second method will be preferred. The second method is useful in initially establishing a catalog.

Maintaining Catalog Information

There are two broad categories of information that is kept in the catalog entry for an image. First, there is file attribute information such as file size, date created, format, etc. This data cannot be changed directly by the user. Also included in this category is a "thumbnail" representation of the image which is used in various types of displays of catalog information.

The second category of information maintained for a catalog entry consists of entries for Title, description   and Keywords. All of these elements can be directly modified by the user. In most cases, this data must be supplied by the user. In a few cases such as for GIF89a images, the title and description are obtained from the image but can be edited by the user.

Accessing Catalog Information

There are four means by which the user can access and change catalog information:

1.   Via the <u>Catalog Catalog</u> command. By means of this command, a catalog record can be created or updated for the currently displayed image.
2.   Via the <u>Catalog Browse</u>command. This command lets you view, sequentially, the contents of a catalog. User supplied information such as   title, description and keywords can also be changed. An important option that can also be accessed is the Search function. Which entries that will be displayed in a catalog can be modified by setting search criteria. Besides searching on keywords defined for each entry, a search can take into account such attributes as   file size, format, number of colors or date.
3.   Via the <u>Catalog Build</u> command. This command provides a convenient means of updating a catalog with a large number of entries. This can be done automatically or the function can pause for each image to allow the user to update title, description or keyword information.
4.   Via the <u>View Slides</u> command. This command will cause a display of as many "thumbnail" images of cataloged items as can be displayed in the currently displayed window. Scrolling commands either from the keyboard or mouse enable the user to scroll through all of the entries in the catalog. By clicking on a "thumbnail" image, a menu can be displayed. One of the options on this menu is a selection that will display the current catalog entry. By this means, the user can update the title, description or keywords.

Information other than user supplied title, description and keywords is automatically updated when exercising the Catalog Catalog or Catalog Build commands. The Catalog Build command is particularly useful for updating a catalog with the location of files. For example if you previously had copied images to floppy disks, the Catalog Build command could be used to update the catalog with the "backup" locations of the files.

Multi-Catalog Updating

Users will undoubtedly find it necessary occasionally to move an image from one catalog to another. This is very easy with PixFolio. There are two ways that this can be done short of simply recataloging an image.

1.   Assuming that an image is already cataloged,   the <u>Catalog Catalog</u> command should be used to display the catalog entry. Then simply select a new catalog using the catalog combo listbox to pick the catalog that you would like the image to be in and then press the catalog button. This method has its drawbacks however. The original catalog entry in the original catalog is still present and must be manually deleted if it is no longer desired. Secondly, the original catalog is no longer selected so,   to continue working in that catalog, the original will have to be re-selected.

2.   A superior way of moving images from one catalog to another can be invoked via the <u>View Slides</u> command. Individual "thumbnails" or slides can be "marked" for some future action. Then the Recatalog Slides command can be used to either Move, Copy, Hide or Delete all of the marked slides. Moving or copying slides to another catalog does not entail selecting a new catalog so that operation can continue uninterrupted in the current catalog.

Rebuilding the Catalog Index

The   method that PixFolio uses to store catalog information on the disk involves writing variable length records. When a catalog record is updated, it may be longer than it previously was and in this case it cannot be saved in the same place in the file. An attempt is first made to find a previously deleted record which is large enough and if none can be found, the record is written to the end of the file.

Over a period of time, the catalog may end up with considerable   "dead" space or previously deleted records that take up space but serve no other purpose. The <u>Catalog Rebuild Index</u> function can be used to re-build the catalog and its associated index and recover any "dead" disk space.

Viewing Images

The method used for viewing an image depends upon whether the image is cataloged or not. If an image is not cataloged, the only way to view it is to use the File Open command to read and display the image. Once displayed, it can be edited or cataloged in the catalog of choice. To do this, you must know the file name and the location on the hard disk or floppy drive where the image is located.

Once an image is cataloged however, it can be viewed by several means.
1.   From the Catalog Browse dialog box, the image can be displayed by pressing the "View button.
2.   From the View Catalog Entry dialog box, again, the "View" button may be pressed. The View Catalog Entry dialog is activated by double clicking on a file name in the Catalog Browse dialog or by pressing OK.
3.   From the View Slides display, the mouse can be used to click on the desired image. Then while holding the left mouse button down, select the "View:" option from the popup menu. An image displayed in this manner cannot be edited or modified unless it is displayed in the main window. However, a menu option allows this to be done.

SlideView

PixFolio offers a graphical way of viewing the contents of a catalog via the Slide View option. Selecting <u>View Slides</u> will result in a the display of the "thumbnail" pictures created for each catalog entry. PixFolio will display as many "slides" as will fit in the current window dimensions. For best results, it is suggested that the window be expanded to a full screen.

The content of the display will be dependent upon the selection criteria currently in effect. The <u>Catalog   Browse</u> command can be used to restrict the items that will be displayed. Additional options available via a pop up menu allow for selected slides to be "hidden" from view.

The selected contents of a catalog can be browsed by using the Page-up or Page down keys or the up and down arrows to scroll up or down a page or line respectively.

A pop-up menu can be displayed by holding down the left mouse button while over a "slide". The selections on this menu offer the following commands:

Information   Display the catalog entry for the image. User supplied data such as description, keywords and title can be changed if desired.

Hide Slide   If this command is selected, the slide will be removed from the display.

Mark Slide   This command marks the slide for some further action using the Recatalog Slides command explained below.

View Slide   This command will cause a full size view of the image to be displayed.

Recatalog Slides   This command will allow the user to perform one of the following actions on all previously marked slides:
Move the catalog entry to another catalog, copy the catalog entry to another catalog, delete the catalog entry or hide the catalog entry.

Editing Images

PixFolio possesses a modest set of   tools that allow images to be edited and manipulated. Using these tools it is possible to perform the following actions:

Cropping or Trimming an Image

In order to trim off excess portions of an image several techniques can be used.

1.

 Using the mouse, hold the left mouse button down at the point which is to become the upper left-hand corner of the resulting image. Then move the mouse to the opposite corner of the desired portion of the image. A rectangle will be drawn on the screen. If the box drawn on the screen is not in the desired location, the operation to draw the box can be repeated until you are satisfied. When the box is stretched out to its desired extents, let up on the left mouse button. then select Edit Crop. The image will then be trimmed to contain only that area encompassed by the box.

2.   If the image only needs to be trimmed on the right side or bottom, the window borders can be moved by using the mouse to drag the borders to the desired place and then the Edit Expand option can be selected to crop the image.

Expanding an Image

You may wish to expand the size of an image so that the borders are extended without otherwise changing the size of the image. There are several ways to do this.

1.   If you only wish to add area to the right side and bottom, then simply drag the window borders out to the desired location and then select the Edit Expand option.

2.   If you wish to add area evenly all around the image, first select the Options Center Image Next, drag the window borders to make the window the desired size. The image will now be centered in the middle of the new window. Finally, select Edit Expand to expand the image. The area added to the window will be set to the currently defined background color. (See Option Background on how to set the background color.

3.   To add area to an image but not necessarily evenly on all sides, first select the Options Center Image Next, drag the window borders to make the window larger than the desired size. The image will now be centered in the middle of the new window.

Now , using the mouse, enclose the area desired in the image with a rectangle and then finally select the Edit Crop command. As in the preceding example, the area added to the image will be painted the current background color.

Resizing an Image

In the preceding discussion on Cropping and expanding images, the image itself did not change size. The overall size of the window in which it is displayed was changed.   It is also possible to stretch or shrink an image. If desired, this can be done independently for each axis (left-right or top-bottom). This may be desirable to achieve some artistic effect or to compensate for distortion caused by conversion from another graphics format.

One important point to keep in mind when resizing an image is that resizing is done by adding or subtracting pixels. The best results then will be obtained when the shrink or stretch factor is some integer multiple of the original image such as times 2 or divided by 2, etc. Using a fractional factor will result in distortion of the image although this affect could vary depending upon the details of the image. It would be particularly noticeable if the image contains a repeated pattern.

There are two methods that can be used to resize an image.

1.   Select the Edit Resize command and resize the image to the desired dimensions. Resizing can be done independently on either the X or Y axis. Resizing can be done either as a percentage or in terms of absolute pixel dimensions.

2.
 Using the mouse and the left mouse button, draw a rectangle encompassing the area to be resized. Then in a similar fashion, draw a rectangle to delineate the new dimensions of the selected region using the *right* mouse button. When you release the button, the image will be overlaid with the stretched or shrunk region. The resulting image can then be cropped as desired.

In order to stretch to dimensions larger than those of the current image, you should first expand the image so that there will be sufficient room for the stretched image.

Rotating and Flipping an Image

The suite of image editing tools of PixFolio is rounded out by several additional features. These are the ability to rotate an image in 90° increments and to be able to flip the image about its X or Y axis. These features are available via the Edit Resize command.

Clipboard Operations.

All of the preceding editing commands primarily affected an entire image. Additional editing operations using the Windows Clipboard can be used to cut or copy all or part of an image to the Clipboard. The data in the clipboard can then be pasted to another application or the current application.   See Edit Cut, Edit Copy Edit Paste commands.

One possible action that could be performed using the clipboard would be to combine several images into one image.

Palette Operations

Each image that is displayed possesses a palette. This palette is a list of colors that are used to display the image. In most cases, the palette is limited to some particular value that is directly proportional to the color resolution of the image. This is generally 2, 16 or 256 colors. If your video display supports 24 bit color, the palette can contain more than 16 million colors.

Most video displays are capable of displaying only 256 colors at a time . Nevertheless, these 256 colors are not fixed but can be any one of 256,000 different colors. The purpose of the palette is to tell the video display which 256 of the possible 256,000 colors will be used.

The palette makes it possible for you to change the colors in the image. Two of the most common palette operations are adjusting the contrast and brightness of an image. By

making all of the colors more intense, the brightness of the image can be adjusted. Likewise, by adjusting the darker colors unequally, the contrast of the image can be adjusted.

Many scanned images contain a wider range of color than can effectively be displayed by many video displays. If an image is too dark, brightening it or adjusting the contrast may bring out details that otherwise could not be seen. PixFolio can easily handle such adjustments utilizing the View Change Palette command.   A Complementary command is the <u>View Gray Scale</u> command which can be used to convert a color image to shades of gray.

Saving Images

The user will need to save images displayed by PixFolio for two main reasons. First, the user has edited or changed the image in some way and wishes to save the resulting images or second, the user wishes to change the format or color resolution of the image, as stored on disk to some other graphics format than the image was originally read in as. All of these needs can be satisfied by the <u>File Save</u> command.   In contrast to the Move and/or Copy options , File Save creates a disk file from the currently displayed image as it is currently displayed Move and Copy on the other hand do not interpret the image data as stored on disk.

The format of a save image can be established in several ways. First, the extension provided for the output file can be used by PixFolio to determine the desired format. Secondly, the File Save dialog offers a number of selections of which graphics format to use.

Format Conversions

PixFolio can be used to change the format of an image form one format to another. This is useful when you have an image that you wish to input to another program that doesn't support that format. In this case, read the image into PixFolio and then save it to the desired format.

PixFolio images may be saved in the following formats:

GIF87a   CompuServe Graphics Interchange Format.
TIFF   Tagged Image Format.
PCX   Windows paint.
TGA   Targa
BMP   Windows bitmap format.
RLE   Windows Run Length Encoded.
IFF   Amiga IFF. (Also Computer Eyes .CE)

Color Resolution

Normally, the user will not wish to change the color resolution of an image. In some cases however there may be good reasons for doing so. It is safe to say that the most efficient storage of an image takes place when the number of colors used in the image is less than the color resolution and is greater than the next lowest   color resolution value. Generally images are stored as 1 bit (2 colors), 4 bits (16 colors), 8 bits (256 colors) or 24 bit (16.8 million colors). Little is gained by reducing the color resolution of an image as this results in a loss of color information. Likewise, increasing the color resolution increases the storage space requirements while providing no additional color information.

The most rational exception to this is converting 24 bit images to 8 bit images. Unless you have a 24 bit video display, there is little need to retain the extensive color information contained in 24 bit images unless the end use, such as for commercial printing applications, requires it. The display of 24 bit images on the usual VGA or SVGA or even 8514 video display is very time consuming. For that reason, you may want to convert a 24 bit color image to 8 bits to facilitate viewing it at a later time. PixFolio can easily handle this conversion in FIle Save.

Printing

This version of   PixFolio offers only two print options.

Printing Images

A currently displayed image, or a portion of it may be printed by selecting the File Print command.
Since most printers, except color printers, cannot print different shades of gray, you should first select the VIEW DITHER IMAGE command to convert the image to a black and white dithered image. This step is not required however if the image is only two colors. Dithering converts solid colors (or gray shades) to patterns of dots that approximate the gray tone. The resulting image when printed   will be easier to view than if dithering were not done.

Printing Catalog Entries

Single catalog entries may be printed from the Catalog Browse dialog. The format of the printout contains the same information that appears on the Catalog Image Screen. Only single catalog entries can be printed.

Future versions of PixFolio will have enhanced printing capabilities.

Run-time Options

PixFolio offers several options that can be used to alter the operation of PixFolio to suit the user.

Set Background Color

When the size of an image is increased, the additional area of the image will be painted to the background color that is set by the Set Background Color.

DIB to Screen

PixFolio will attempt to maintain both a device independent bitmap (DIB) and a device dependent bitmap (DDB) for any image being displayed. Display of DIBs is slow, particularly when it is a 24 bit color images. For this reason, it is best to allow PixFolio to create a DDB. However, in situations where memory is low, there may not be enough memory to create a DDB. By selecting the DIB to Screen option, the user will forgo creation of a DDB and the DIB will be displayed directly to the screen.

Display Warnings

In some cases, it is necessary for PixFolio to issue warning messages to the user. These messages, once the user becomes familiar with PixFolio may be more of an irritation than a help. Therefore, the user can suppress all but the most serious errors and warnings by selecting this option.

Center Image

If a window is expanded or a full screen view is selected, the image being displayed will be located in the upper left-hand corner of the window. Selecting the Center Image option will cause all images that are smaller than the size of the current window to be centered both vertically and horizontally in that window.

Background Type

This option determines whether backgrounds will be painted with solid colors or dithered colors. The dithering option may give a wider apparent range of colors particularly if the palette is limited to say 16 colors.

Fix Tiff

This option allows a certain amount of relaxation of the TIFF standard for certain types of TIFF files that do not have the correct values for the Strip Byte Counts tag.

Play Step Rate

PixFolio can display GIF animation sequences from GIF87a files. However, since the GIF file is not being decoded real-time, which in many cases is used to "pace" the display, an option is provided to the user to set the time delay between successive frames of the animation.

Default Options

Default options can be specified which go into affect whenever PixFolio is started. Some of these options are:

Initial Catalog　　　　This option specifies which catalog will be selected initially.

Default Extensions　　This option specifies the file extensions of all files that should be displayed on a file selection list. The value of this option is used in turn as a default for establishing a similar option whenever a new catalog is created.

Default Path　　　　　If this option is utilized, it will specify the current path that will be displayed whenever the file open dialog is accessed. Otherwise, the path of the default catalog will be used.

Display Center　　　　Whether images should be displayed centered or not.

DIB to Screen　　　　Turns on the DIB to screen option.

Background type　　　Whether backgrounds should be solid or dithered.

Fix Tiff　　　　　　　　　Should the special rules for TIFF files be put into effect.

Display Warnings　　　Should warning messages be suppressed.

All of these options can be set via the <u>Options Default Options</u> command.