

PixFolio

Image Catalog System



User Guide

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

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Options and Miscellaneous Topics

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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 of PixFolio is the concept of the "Catalog". A catalog is like a disk file directory in that it is an index to a 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 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 occupying 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 using sophisticated techniques. 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. In addition, PixFolio offers the ability to dither images. Dithering is a means of displaying images whose color resolution exceeds your video system's capacity.

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.

PixFolio utilizes the **Microsoft Multiple Document Interface** (MDI) which allows PixFolio to display multiple images concurrently plus one or more Thumbnail View Windows.

PixFolio also supports Microsoft's **Object Embedding and Linking** protocol as a server application. This allows you to link or embed images supported by PixFolio in any **OLE** client application such as Windows Write or Word For Windows 2.0.

PixFolio will also accept a file name "dropped" on it from File Manager.

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 only one catalog; it can be located in more than one catalog at a time.

Creating a Catalog

PixFolio always maintains at least 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. These attributes are entered via the Catalog Select Catalog dialog, an example of which is shown below:

Select Catalog

Catalog Title:
pixfolio [v] [down arrow] [OK] [Cancel]

New Catalog Title:
pixfolio [Info] [Help]

Catalog File Name: PIXFOLIO
Default Extensions: *.BMP;*.DIB;*.RLE;*.GIF;*.PCX;*.TIF;*.LBM;

Path:
D:\PIXFOLIO

Volume: DRIVE D

Directory:

Catalog Action

Select as Current **R**ead Only

Change Name/Extensions

Delete

Create **N**ew

Password []

Catalog Select 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.

Volume A volume name may be optionally specified for a catalog. If present, the volume name of the drive containing the catalog will be checked prior to opening a catalog. This option is useful when a catalog exists on a removable drive such as a Bernoulli box. If the correct volume is not mounted, you will be prompted to insert the proper volume.

Each catalog defined in PixFolio is represented by a **Catalogx =** 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. The volume ID is optional.

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. Also, the optional volume ID may be changed.

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.

Password

A catalog can be password protected by specifying a password when you change catalog attributes. It also can be specified when you create a new catalog. If changing the password, you will be prompted for the old password before the password is changed. In either case, before a password is changed, you will be given a chance to verify it before it is changed.

Passwords are for catalogs only. There is no password protection for image files. Due to the limitations of DOS, there is no easy way that individual files or directories can be password protected since these files can be freely manipulated by other programs. However, there are several DOS utility programs that allow you to set the hidden bit on subdirectories. If this is done, the subdirectories will not show up in dirctory listboxes such as in File Open. If you know the name of the subdirectory, you can however include it as part of the file name and PixFolio will find it. Images cataloged in "hidden" directories can still be viewed. While not perfect, this will give you

a means to restrict access to selected groups of images.

You will note that PixFolio does not require a password to delete a catalog. Since you can always use DOS commands or File Manager to delete a catalog file outside of PixFolio, requiring a password is superfluous.

One final note on passwords. Any catalog that is password protected will require the entry of the password by anybody who attempts to open the catalog. If two network users, for example, open a network based catalog on different PC's, they will still have to each supply the same password. Also, if you "Create" a new catalog that already exists, it will retain any existing password and PixFolio will ignore the password you intended to apply to 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.

Manually Cataloging

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.

An example of a catalog entry is shown below:

The above illustration is an example of the Catalog Catalog command. It 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.

Catalog Dropdown combo listbox used to select the catalog to be updated.

Program Fields:

Filename The name of the file. In the case of KODAK photo CD's located on a CD, the image will be cataloged with a pseudo name made up of the CD's creation time (an eight digit Hexidecimal number), with an extension of nnn wher "nnn" is the iamge's number on the Photo CD. This is because Photo CD's use the same file names, e.g. IMG0001.PCD on every CD.

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.

Primary Vol The volume name of the primary location.

Backup Vol & Path The volume name and path of the backup floppy disk.

Size File size in bytes.

Date & Time Creation date and time of the file.

Info The height, width , number of colors 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 application.

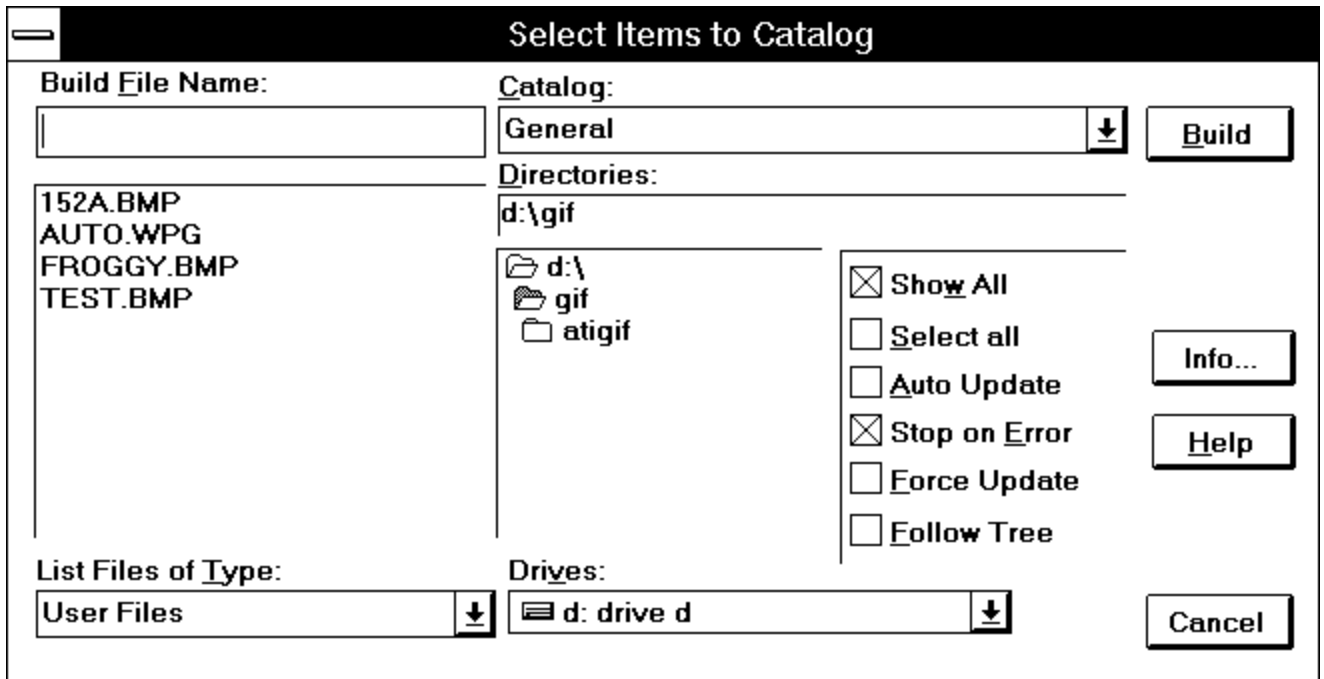
Move Moves or copies the file to some other location.

(image) The "thumbnail" image that is displayed is a smaller version of the original image file. If are recataloging a file, the thumbnail will be recreated from the current file.

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 Build Function

The second method of cataloging images is more suited to making multiple updates to a catalog.



Catalog Build Dialog

The listbox contains files that can be selected to be updated to the catalog. When a file (or files) is selected and the BUILD button is pressed, the image will be read in and cataloged. The **Auto Update** option, if off, allows for fully automatic updating of the selected files; otherwise, the user must press the **CATALOG** button for each file after updating the keywords, description and title information. To facilitate building all the files for an application or on an entire CD-ROM volume, the **Follow Directory Tree** option can be turned on to list all files in subdirectories of the current directory.

If the **Show All** option is off, the listbox will only display those files that are not cataloged in the selected catalog. The Select all option can be used to select all files at once; it will toggle on/off the selection status of all files displayed.

Stop On Error can be turned on to bypass prompts for error or warning messages such as when large 24 bit files are read.

A feature of Catalog Build is that images that are already cataloged will not be read to create a thumbnail. However, the catalog entry will be updated with backup volume and path information for files on floppy disk. However, if you wish to reconstruct the thumbnail for catalog entries that already exist, you can turn on the **Forec Update** option.

Another feature of Catalog Build is that if a floppy disk containing images is processed and the floppy disk is not labelled, PixFolio will prompt you and label the disk for you so the catalog entry can indicate the volume id.

When cataloging Video for Windows AVI files, Build will create a thumbnail from the first frame of the video clip. If you wish to use some other frame of the clip, you can load the clip, stop it at the

desired place and manually catalog it.

Maintaining Catalog Information

There are two broad categories of information that are 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 Catalog Catalog command. By means of this command, a catalog record can be created or updated for the currently displayed image.
2. Via the Catalog Browse command. This command lets you view, sequentially, the contents of a catalog. User supplied information such as title, description and keywords can be changed. An important option that can also be accessed is the Search function. The scope of 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 Catalog Build 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 View Thumbnails 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 cataloging an image from scratch in another directory.

1. Assuming that an image is already cataloged, the Catalog Catalog 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 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. Another way of moving images from one catalog to another can be invoked via the View Thumbnails command. Individual "thumbnails" can be "marked" for some future action. Then the Process Thumbnails command can be used to either Move, Copy or Delete all of the marked thumbnails. Moving or copying thumbnails to another catalog does not entail replacing the current catalog selection so that operation can continue uninterrupted in the current catalog.

3. A third method of copying entries from one catalog to another is to display thumbnail views of both the "source" and "target" catalogs. Then, thumbnails in the "source" catalog can be "dragged" (by holding down with the left mouse button on the thumbnail's title) to the desired location in the target catalog. The original catalog entry will remain intact.

Exporting Catalog Information

PixFolio supports a way of exporting catalog information for use in other programs via the Catalog Export command. The text data incorporated into a catalog entry is written to an ASCII, comma-delimited file that can be imported into many database or spreadsheet programs. An option is available to omit the catalog entry's description field. An example of an ASCII comma-delimited item is shown below:

```
"386CMPTR.CGM", "", 667,482,"256","CGM","D:\PR2US\CLIPART\COMPUTER\","DRIVE  
D", "", "", "", "3356", "05/22/1991", "03:00:00", ""  
"4SEASONS.PCX", "", 1080,986,"2","PCX","G:\PCX\","WORM0001", "", "", "CHRISTMAS SANTA  
CLAUS", "92803", "08/04/1988", "12:00:00", ""  
"5_25DISK.CGM", "", 667,482,"256","CGM","D:\PR2US\CLIPART\COMPUTER\","DRIVE  
D", "", "", "", "1274", "05/22/1991", "03:00:00", ""  
"9TO5.PCX", "", 1064,1137,"2","PCX","G:\PCX\","WORM0001", "", "", "CLIPART  
9TO5", "58938", "08/03/1988", "12:00:00", ""  
"A-MELLEA.TIF", "", 852,689,"2","TIFF","G:\TIF\","WORM0001", "", "", "FUNGUS  
DRAWING", "23548", "11/21/1991", "07:32:13", ""
```

The Fields in each item. separated by commas are, in sequence:

1. File Name.
2. Title.
3. Image width in pixels.
4. Image height.
5. color resolution: 2, 16, 256, >256.
6. Format: GIF89, PCX, TIFF, etc.
7. Primary pathname.
8. Primary volume id.
9. Backup pathname.
10. Backup volume id.
11. File size in bytes.
12. File modification/creation date.
13. File time.
14. Description (optional).

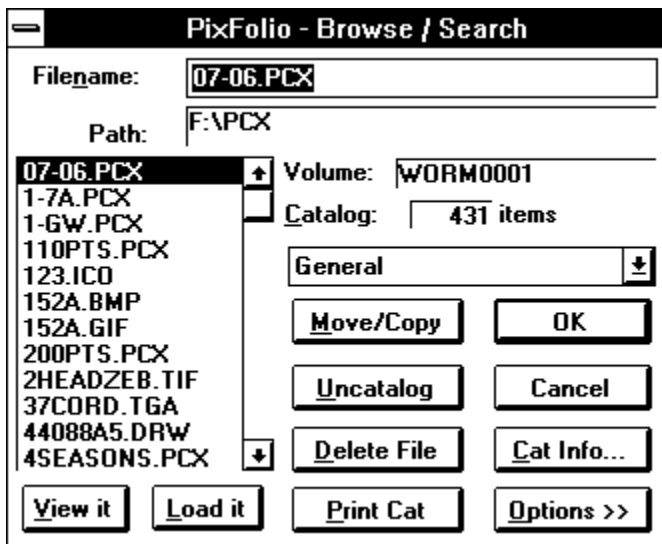
PixFolio also supports an alternate "Import" format that contains a subset of the above

information. The Import format only contains the file name, title, description and keywords fields. This file format is the one used by PixFolio to import catalog information. Control characters such as Carriage Return, Line Feed, quotes, etc are coded with "escape"sequences so that they are not confused with the actual end of record line feed, carriage returns, quotes, etc. See on-line help for more specifics.

Restricting the Display of Catalog Entries

When dealing with large catalogs consisting of hundreds of images, it may be desirable to restrict the display of catalog entries to those meeting certain criteria. This can be done using the Catalog Browse Command to apply search criteria to the catalog list. Alternatively, individual catalog entries can be "marked" and hidden from the Thumbnail View screen.

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



Catalog Browse

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

Move /Copy File The file can be moved or copied to another location. The catalog will be updated with the new location of the file.

Delete File The file can be deleted from the hard disk. The file is also deleted from the catalog.

View It/Load It The file can be opened and viewed. View It will end the Browse Dialog whereas Load It will load the image but the dialog will remain active.

OK The catalog entry for the file can be viewed and 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.

Cancel Cancels the dialog returning you back to the main viewing window.

Uncatalog Deletes the file from the catalog only.

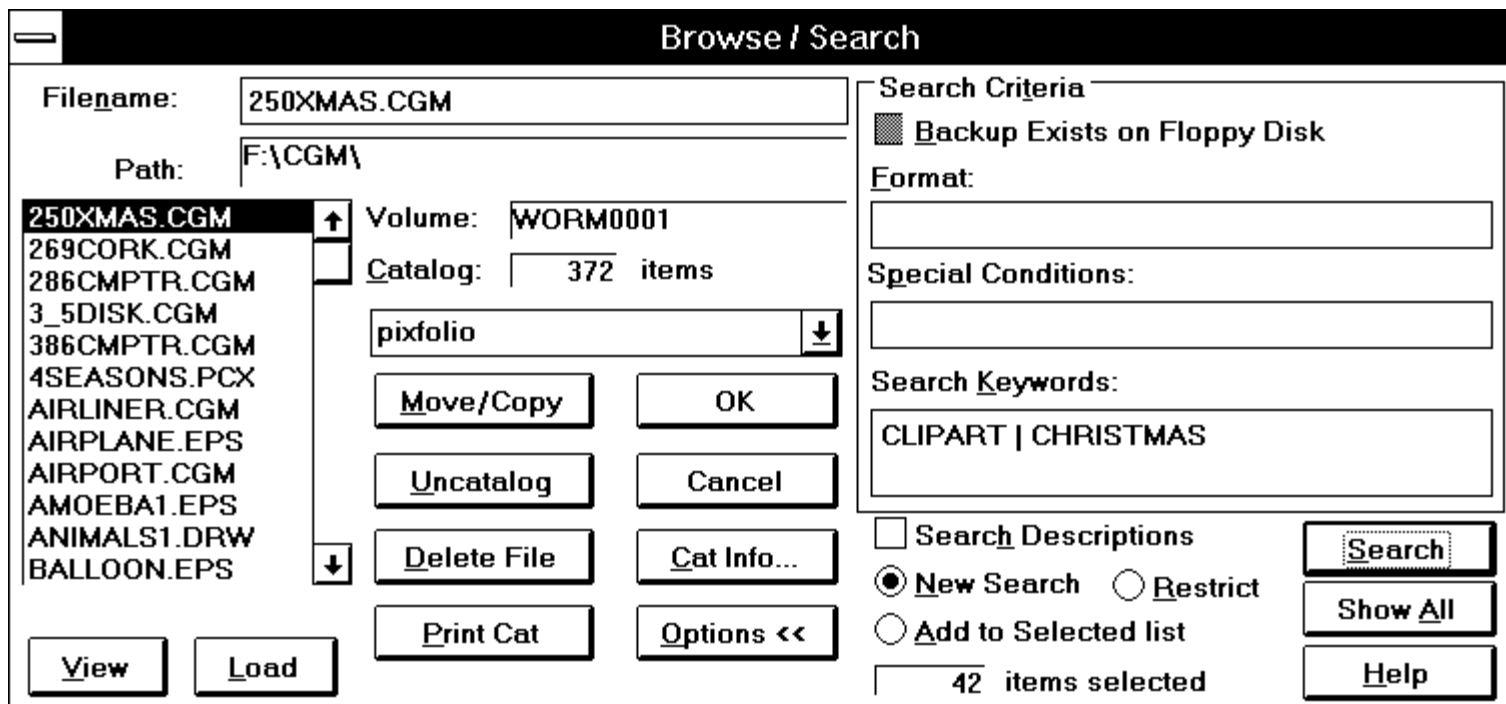
Print Cat Prints the selected catalog entry.

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, as they appear in the "info" box on the catalog display.
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:



Catalog Browse: After a search operation.

To search, enter 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 entered 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 an edit box is blank, then all catalog records that do not 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". Case is not significant in searches. A logical AND operator '&' can be used to separate two search criteria. While a logical OR operation is implied, the "|" operator can be used to specify a logical OR operation. Both the logical AND "&" and the logical"OR "|"can be prefixed with "!" which means NOT. Parentheses can be used to form complex search criteria. For example, if you want to select the keywords, CLIPART and ANIMALS, use CLIPART&ANIMALS as the search criteria. An example of a more complex specification is ((Clipart & Animals) | Pets).

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. You may also use these special codes in the Keywords box in conjunction with other keywords. 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 THUMBNAIL VIEW command will only display the currently selected catalog entries.

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 locate the file and then read and display the image. As an alternative, however, PixFolio will display an image that is "dropped" on it from File Manager. Once an image is displayed, it can be edited or cataloged in the catalog of choice.

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 Thumbnails display, double click with the left mouse button or click the right mouse button to bring up the pop-up menu and then select the "View:" option from the popup menu.

More than one image can be viewed by selecting the "mark" option from the pop-up menu and then select "Process Thumbnails". This dialog will allow a variety of actions to be taken on marked thumbnails including opening up an image for viewing.

Supported Formats

Graphic formats supported by PixFolio are:

<u>AVI</u>	Video For Windows video and sound clips. (Requires Optional Photo CD/VFW support modules). <i>(read only)</i>
<u>BMP/DIB</u>	Windows bitmap format.
<u>CGM</u>	Computer Graphics Metafile <i>(read only)</i>
<u>CLP</u>	Windows Clipboard file
<u>DRW/GRF</u>	Micrografx vector file formats <i>(read only)</i> .
<u>EPS</u>	Encapsulated Postscript imbedded TIFF preview images. <i>(Read Only)</i>
<u>FLI/FLC/CEL</u>	Autodesk Animator FLI/FLC animation files. <i>(Read only)</i>
<u>GIF</u>	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")
<u>JPG</u>	JFIF format JPEG compressed images.
<u>ICO</u>	Windows Icon <i>(read only)</i>
<u>ICS</u>	Image Cytometry Standard files. <i>(read only)</i>
<u>IFF/LBM/CE</u>	Deluxe Paint II LBM & IFF files. The file extension "CE" is created by Digital Vision's Computer eyes video capture product.
<u>IMG</u>	GEM/IMG (Digital Research) format. <i>(Read Only)</i>
<u>MAC</u>	Macintosh MACPAINT files <i>(Read Only)</i>
<u>MPG</u>	Mpeg movie files <i>(Read Only - 32 bit version only!)</i>
<u>MID</u>	MIDI sound files.
<u>MOV</u>	Quicktime movie files.
<u>PCD</u>	KODAK Photo CD images. Requires Optional Photo CD/VFW support modules). <i>(read only)</i>

<u>PCT</u>	Macintosh PICT bitmap graphics. (<i>read only</i>).
<u>PCX</u>	Z-Soft Paintbrush files.
<u>RLE</u>	CompuServe Run Length Encoded file format and Windows compressed RLE bitmaps.
<u>TGA</u>	Targa file format. (TrueVision Advanced Raster Graphics Array)
<u>TIFF</u>	Tagged Image format (Supports TIFF version 6).
<u>WAV</u>	WAVE sound files.
<u>WMF</u>	Windows Metafile.
<u>WPG</u>	WordPerfect Graphics WPG files.

Additional formats can be supported by PixFolio by utilizing the Graphics Import Filters that are supplied with Word for Windows and Aldus Pagemaker. Some of the available formats include: HPGL, AutoCad DXF and Excel graphs. See Options for more details.

NOTE: AVI, MID, MOV, PCD and WAV file support is provided only in the extra-cost add-on package for registered users. See the PIXREGST.ME file for details on ordering this package. AVI files require Video for Windows support. Quicktime MOV files require Quicktime for Windows which can be obtained from Apple Computer.

Color Resolution Formats

Images can be read in several resolutions:

1 BPP 1 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.

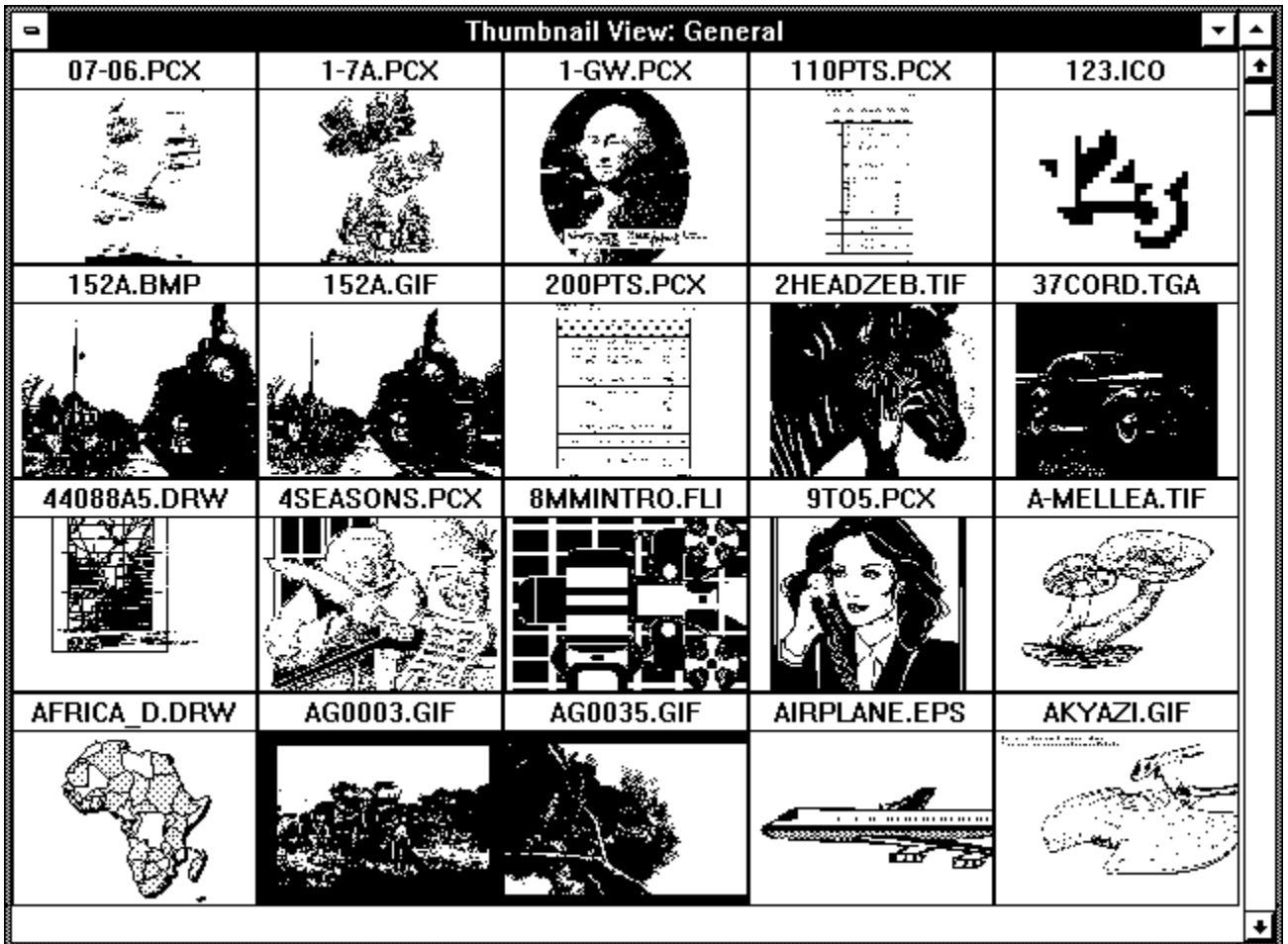
24 BPP 24 bits per pixel or 16 million colors.

The number of colors displayed will be determined by the the maximum number of colors that your video display and driver software can handle. PixFolio will retain all color information in an image even if it can't be displayed properly. For example, if you are using the standard VGA driver that comes with Windows, you can only display the 16 colors that Windows uses. If you read an image that uses 256 colors most of the colors will be displayed using the "nearest" color. The result in most cases could be described as awfull. PixFolio offers a workaround for this situation with its Auto Dither option. Dithering is a way of simulating the display of many colors by substituting various combinations of the 16 colors and fools your eyes so that the image appears to have more shades of color than can be actually displayed. Turning Auto Dither on will force PixFolio to automatically dither images for display if they have more colors than the display can present.

Thumbnail View

PixFolio offers a graphical method of viewing the contents of a catalog via the Thumbnail View option. Selecting View Thumbnails will result in the display of the "thumbnail" pictures created for each catalog entry. PixFolio will display as many "thumbnails" as will fit in the current window dimensions. For best results, it is suggested that the window be expanded to a full screen.

Only those items in the current catalog that have been selected and which have not been "hidden" will be displayed unless the Catalog - Display Hidden option is active. Catalog entries are normally displayed in alphabetic sequence, but the user can define a user-defined sequence by moving the individual thumbnails around to suit.

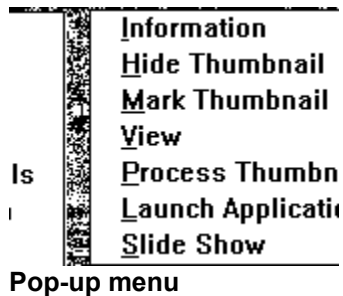


View Thumbnail View

The content of the display will be dependent upon the selection criteria currently in effect. The Catalog Browse command can be used to restrict the items that will be displayed. Additional options available via a pop up menu allow for selected thumbnails 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 "thumbnail". 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 Thumbnail If this command is selected, the thumbnail will be removed from the display.

Mark Thumbnail This command marks or un-marks the thumbnail for some further action using the Process Thumbnails command explained below. Marked thumbnails are checked and will have an asterisk "*" next to the file name in the title bar.

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

Add Thumbnail This command is only present when the CATALOG - DISPLAY HIDDEN option is on. it's intended purpose is to enable you to "unhide" a thumbnail that has been previously hidden or which was not selected by the Catalog Browse command.

Process Thumbnails This command will allow the user to perform one of the following actions on all previously marked thumbnails:

Move the catalog entries to another catalog.

Copy the catalog entries to another catalog.

Delete the catalog entries.

Hide the catalog entries.

Print the catalog entries.

Mark All catalog entries.

View the image(s).

Unmark All catalog entries.

Move/Copy Files Move or copy marked files to some other drive or directory.

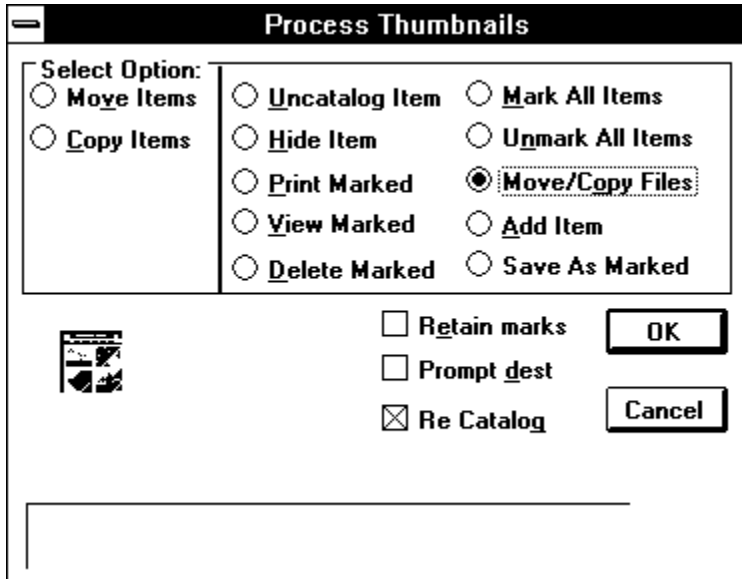
Delete and Uncatalog Files. Delete files from the primary location and uncatalog them also.

Save Files to another Format. Save a group of marked files to a new format.

The determination of whether to "move" or "copy" is made in the dialog that is presented to select the target catalog. A checkbox option can be checked as desired if you do not want to be prompted for each file that is marked. In this case, subsequent files will all be moved or copied to the same target location.

Another option can be set to not update the catalog with the new location of the files. This option is intended to be invoked when you are making copies of files for some external use. For example, you wish to copy a list of marked files to a floppy disk to give to another user.

Add Add marked entries back to the display. (Only present when the Catalog Display Hidden option is in effect).



Process Thumbnails dialog

Note:

A target catalog need only be selected for the Move and Copy options; all other options operate on the currently selected catalog. For the move, copy, print and Save-as options, a checkbox can be checked to cause PixFolio to avoid clearing the marks on the items. This is useful if you wish to perform multiple operations such as copy items to another directory, and then print the same entries.

Launch Application This command can be used to start up another application using the selected image. You will be prompted for the program path/name and for any additional parameters.

Launch Application

Enter the program that you wish to launch plus any parameters that are needed.

Program:

File:

Parameters

PixFolio will append the file name and parameters together to the contents of the Program box to be used as the command line for starting up the application.

A default for "Program" can be established for a particular file type, e.g. "GIF" or "PCX", etc., by adding an entry to the PixFolio section of WIN.INI as follows:

xxx=[drive][path]{program},[parameters] (where "xxx" is the file type: GIF, PCX, BMP, etc).

Windows Notepad or SYSEDIT can be used to edit WIN.INI.

Slide Show This command will cause all of the marked slides in the current catalog to be displayed in full screen mode sequentially. Files to be displayed must exist on a non-removable drive.

Several options can be set that will determine the operation of the Slide Show. These options can be set via the **Catalog Slide Show Options** dialog:

1. Delay between slides. This is the minimum amount of time that an image will be displayed. The image will be displayed an additional amount of time while the next image is loaded. The delay time is expressed in milliseconds; 10000 = 10 seconds.
2. Number of animation passes. This value establishes how many times an animation sequence (FLIC or GIF89a) will repeat before going to the next slide.
3. Display file name. If this checkbox is marked, the filename of the image being displayed will appear in the upper left-hand corner of the screen.
4. Pause between. If this checkbox is marked, slides will not automatically advance from one to another. The right mouse button must be double-clicked to proceed.
5. Repeat Show. If selected, the slide show will start over at the beginning when the list of marked slides has been displayed. To terminate the slide show, it will be necessary to

double click with the left mouse button.

6. Whether or not to display the cursor during slide show.

During a slide show, double clicking with the left mouse button will terminate the slide show. GIF89a animations that require user input can be advanced to the next frame by clicking the right mouse button.

To create the smoothest running slide show, it is suggested that all images be converted to Windows BMP format. This will result in the fastest load time for the individual slides.

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, called a marquee, will be drawn on the screen. If the marquee drawn on the screen is not in the desired location, the operation to draw the marquee can be repeated until you are satisfied. When the marquee 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 and/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 command. 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 command. 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; However, 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 replicating

or eliminating 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 could 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 enter the desired dimensions. Note that the default dimensions that will be displayed will be those of the current window, so one way to resize is to stretch the window frame to the desired size before selecting **Edit Resize**. Resizing can be done independently on either the X or Y axis. The resizing factor can be specified either as a percentage or in terms of absolute pixel dimensions.

2. Using the mouse and the left mouse button, draw a marquee encompassing the area to be resized. Then in a similar fashion, draw a marquee to delineate the new dimensions of the selected region using the right mouse button. When you release the right mouse 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 or mirror the image about its X(horizontal) or Y(vertical) axis. These features are available via the Edit Resize command.

Size Window to Image

Windows may alter the size of a window when the **Window Tile** or **Window Cascade** menu options are selected. To restore a window to the dimensions of the image, select the **Size Window to Image** selection from the **Window** menu.

Clipboard Operations.

All of the preceding editing commands primarily affect 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. Likewise, other applications can copy data to the clipboard and it can then be pasted by PixFolio. See Edit Cut, Edit Copy Edit Paste commands.

PixFolio will copy both a DIB and device dependent bitmap to the clipboard. PixFolio can accept the same two formats from the Clipboard as well as a Windows Meta File format.

PixFolio will automatically convert an image's palette and color resolution so that, for example, a 16 color image can be pasted onto a 256 color image without corrupting the colors. If the clipboard image being pasted has a different color resolution than that of the current image, you can select to either convert the current image to the higher resolution or dither the clipboard image to the lower resolution.

One possible action that could be performed using the clipboard would be to combine several

images into one image. See Creating a new image in the next section.

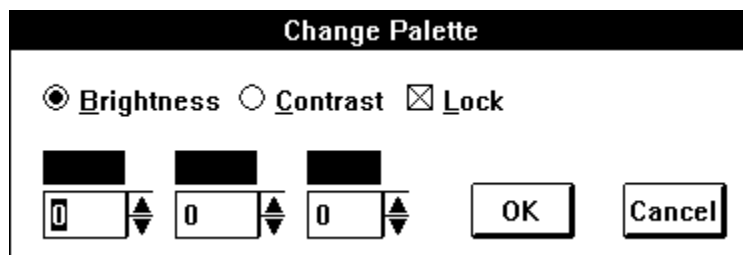
Palette Operations

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.

The majority of video displays are capable of displaying only 256 colors or less 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 View Gray Scale command which can be used to convert a color image to shades of gray.



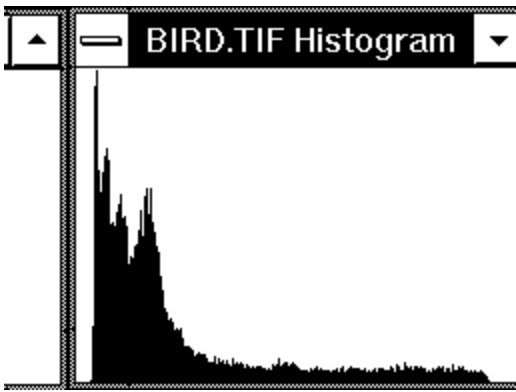
View Change Palette dialog

Histogram Display

The Display Histogram function can be used to display graphically the distribution of pixel intensities in an image. It is only provided for 8 and 24 bit images. The horizontal axis of the display represents intensity from 0 to 255. The vertical axis represents the relative usage of a given intensity level.

Histograms are useful in determining whether an image is too dark or too light. It also can give an idea of the "dynamic range" of a picture. A picture with closely grouped histogram bars is an example of an image with poor "dynamic range". Interpretation of a histogram is useful in determining whether brightness and/or contrast adjustments can or need to be made.

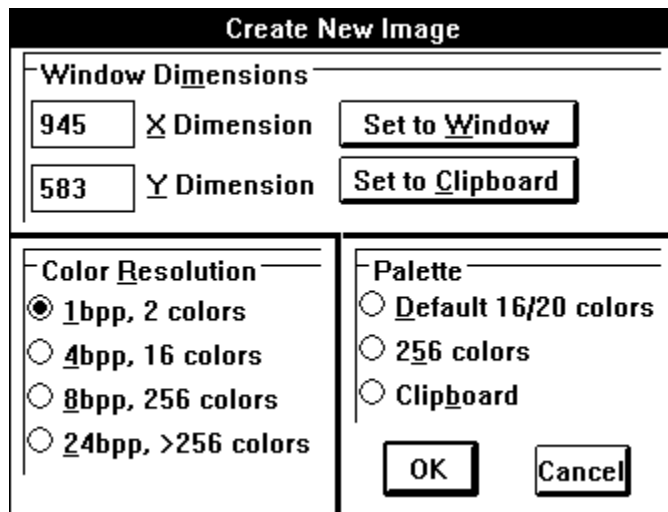
The following histogram is of a picture that is decidedly dark and has less than optimum "dynamic range".



Creating a New Image

PixFolio provides for the creation of a completely new blank image which can then be edited. For example, you would like to combine several images into a composite image. The way to do this is:

1. Create a blank image of the desired size by utilizing the File New command:



- a. The default dimensions shown in X Dimension and Y Dimension will be that of the window size before you select File New. If you know what size that you want the new image to be, you can manually enter the desired X and Y dimensions. The Set to Window and Set to Clipboard buttons will set or reset the X and Y values to that of the current window or Clipboard image (if any). Select Clipboard if you want the new image sized to be the same as the image in the clipboard.
 - b. The color resolution of the new image defaults to 1 bit per pixel. If you want more than two colors, select some other value. The value selected will be the maximum number of colors that the image can contain.
 - c. The Initial palette of the new image defaults to the Windows default palette. This palette will contain 16 colors unless you have a Super VGA or higher resolution video driver in which case it will contain 20 colors. You may also select a 256 color palette that contains a default set of colors. If there is a palette stored in the clipboard, you also can select it as the palette for the new image. It is recommended that you use the palette from the clipboard if it is available as this will eliminate the need to convert the image when an image in the clipboard is pasted to the new image.
2. You now may paste the contents the clipboard to the new image.
3. Switch to another instance of PixFolio or some other application to copy to the clipboard the remaining images that you want to combine.
4. Repeat steps 2 and 3 above as often as necessary and then select File Save to save the new

composite image.

Saving Images

The user will need to save images displayed by PixFolio because, the user has edited or changed the image in some way and wishes to save the resulting images or, the user wishes to change the format or color resolution of the image, as stored on disk to some other graphics format. All of these needs can be satisfied by the File Save-As 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 saved 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 in either compressed or RLE format.
IFF Amiga IFF. (Also Computer Eyes .CE)
JPEG JFIF format JPEG compressed images.
WMF Windows metafile.

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.

Sometimes images are written in 256 color format but only contain 16 colors or less. In this case,

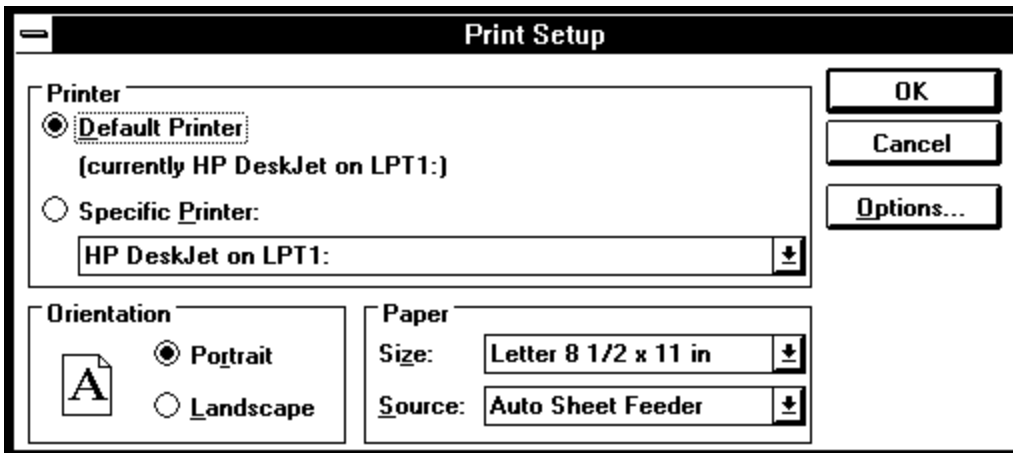
the disk space taken up by the image could be substantially reduced by reducing the color resolution to 16 colors (4 bits).

Dithering

Another option that can be utilized to convert, for example, a 24 bit image to 8 bits, is the **Palette Dither** command. While dithering can take a considerable length of time, the results can be quite good. Dithering initiated by the Palette Dither command as opposed to the **Auto Dither** option permanently changes the color resolution of the file. The **Auto Dither** option on the other hand only dithers the image for display on a device that does not have the capability of displaying all of the colors in the image.

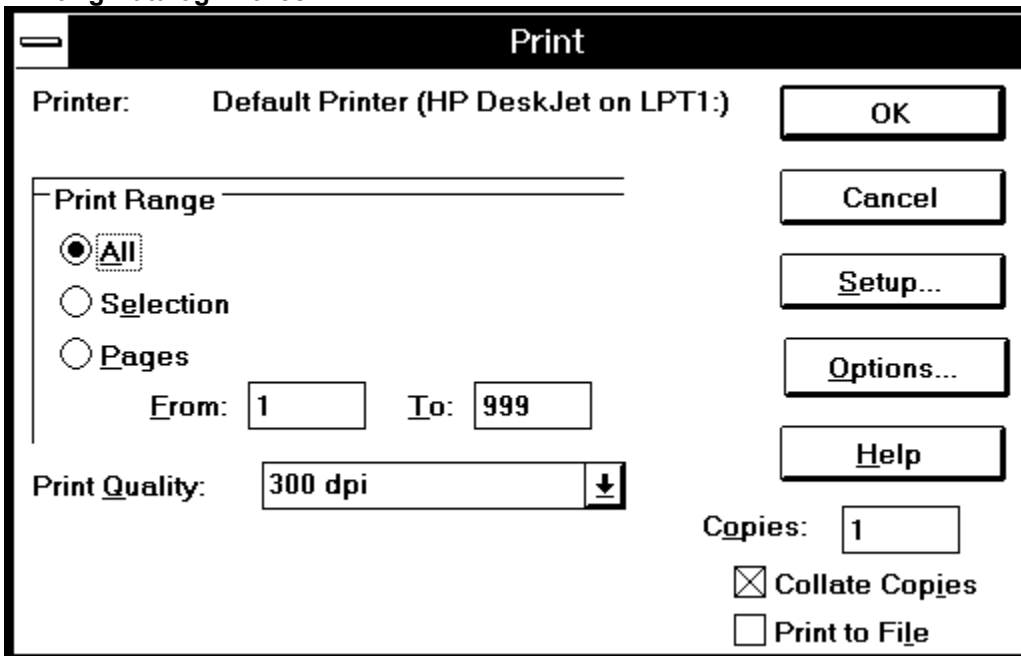
The degree of dithering is controlled by which palette that is selected:

1. Black and white. The dithered image will only contain 2 colors. This may be desirable in preparation for printing since many printers, except for color printers, can only print black or white and don't know what to do with shades of gray. (Note that most of the print drivers distributed with Windows 3.1 do a good job of printing color images as halftones and do not require that the image be dithered to black and white first.)
2. Color (use current palette). This option is available when a 24 bit image is displayed. This will most likely be a 256 color palette.
3. 16 Color palette. This palette is good for displaying images on a 16 color video display and if you wish to save the image with 4 bits per pixel color resolution.
4. 20 color stock palette. Use this palette to display images with the Windows standard 20 color palette and with video drivers such as the standard VGA driver.
5. 256 color Palette. This palette has an even distribution of all colors. This palette may be used to provide a common palette for cutting and pasting several images that have different palettes.
6. Clipboard palette. You may use the palette of another image by copying it to the clipboard. This also copies the image's palette to the clipboard. A palette from the clipboard may be used to provide a common palette for cutting and pasting several images that do not have the same palette.



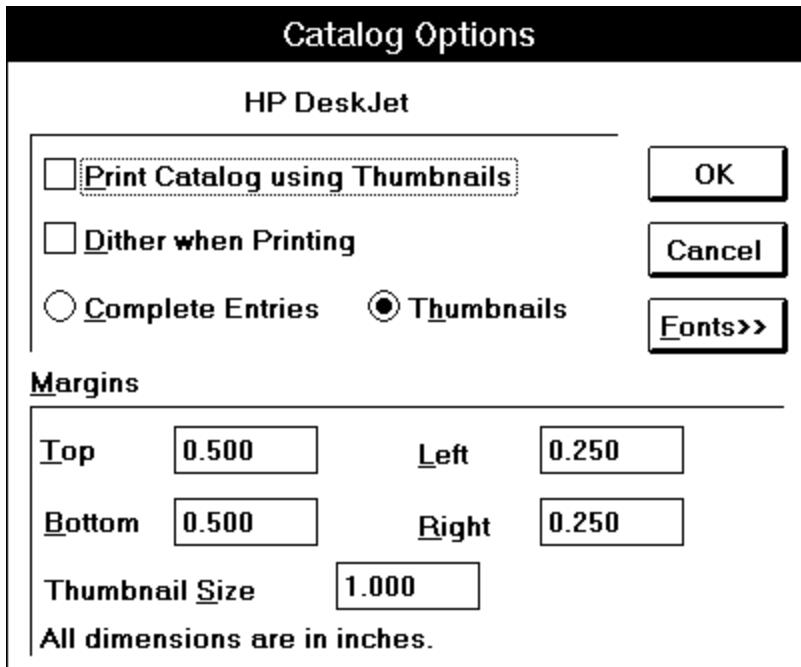
File Select Printer Dialog

Printing Catalog Entries



Print Catalog Dialog

This dialog allows you to select the range of entries to print. You may print all entries in the catalog, or a range of pages by selecting the appropriate option. The **Setup** button allows you to select a different printer and/or the page size and other printer options. The **Options** button allows you to select options such as the format (Complete entries or a Thumbnail only format) of the printed catalog entries and the size of the margins and printed thumbnail size.



Catalog Options Dialog

The **Print Catalog using Thumbnails** option, if turned on, forces PixFolio to utilize the Thumbnail image that is part of the catalog entry. Otherwise, the image will be read from disk prior to printing. If this option is turned off, it will result in far superior picture resolution at the expense of the time necessary to read the images in. It also may be less convenient as you may have to repeatedly swap disks to read images that do not reside on your hard disk. With this option turned off, PixFolio will not have to read in the original image.

The **Dither when Printing** option should be turned on if the printer cannot print color or convert to grayscale. In that case, PixFolio will perform the necessary dithering. This option affects both printing of whole images as well as catalog entries.

The above options are saved in the WIN.INI file, by printer, so that when a new printer is selected, its options will be established automatically.

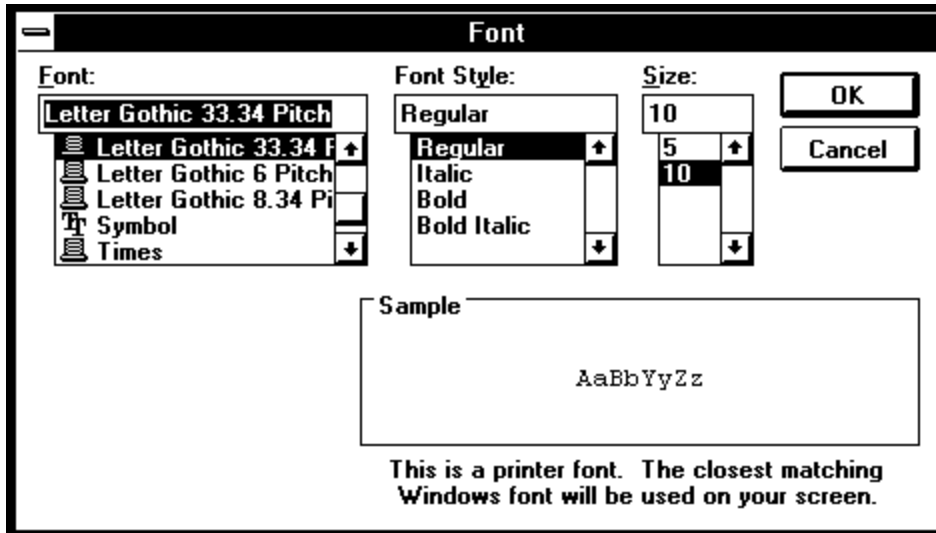
The **Complete Entries and Thumbnails** radio buttons allow the selection of an alternate "dense" print format when printing a catalog. When the **Thumbnails** format is selected, only the thumbnails and their file name will be printed. On 8 1/2" x 11" paper, you should be able to print 20 thumbnails per page. (Assuming 3/4 inch top margins, 1/2 left, right and bottom margins and a 1.5 inch thumbnail.)

Margins

By setting the margins and changing the size of the thumbnail that is printed, it is possible to format the printed catalog to fit various paper sizes. For example, if you want to print on 5 1/4 x 8 1/2 paper, changing the margins to 1/2 at top and bottom, the left and right margins to 1/2 inch and the thumbnail size to 1 inch, the same number of thumbnails can be printed per page as using a 3/4 inch top margin, and 1/2 inch side and bottom margins with a 1.5 inch thumbnail on a

8 1/2 x 11 inch piece of paper.

Pressing the **Fonts** button allows you to select a typeface and size of type for the catalog print functions. Separate font information will be established for each printer and will be used the next time that the printer is selected.



Please note that selecting a Font Style other than "Regular" will not result in that style being used. PixFolio itself determines whether to print portions of the catalog printout in bold or underlined text.

Printing Images

An image or a selected portion of it may be printed via the File Print command. To print just a portion of an image, use the mouse to draw a marquee around the portion you wish to print. Then select the File Print option.

The **Options Options** dialog allows you to scale the picture to the desired size. To aid in selecting the correct size, the size of the image can be expressed as a percentage of the original or in pixels. Also, the resulting size in inches or centimeters is displayed. PixFolio assumes that the image is comprised of square pixels and automatically scales the image accordingly if the printer horizontal and vertical resolutions are not the same to avoid distortion.

Printing Catalog Entries

There are three ways to print a catalog entry:

1. Select Print Catalog from the Catalog Browse dialog. Only one entry, the currently selected item can be printed at a time.
2. Select the Catalog Print command from the Catalog Menu. This can be used to print all of the selected entries in the current catalog. The Catalog Browse - search commands can be used

prior to this to narrow the scope of the request to those catalog entries meeting requested criteria. Up to 4 catalog items will be printed per page. Or, if the thumbnails only option is selected, as many as 20 or more entries, depending upon how page margins are set, can be printed per page.

3. Select the Print option from the Process Thumbnails menu command from the pop-up menu in Thumbnail View. This command will print only "marked" entries. It is the best way of printing specific items to print.

Note: There are two catalog print formats supported by PixFolio. The default format will allow 2 to 4 entries to be printed per page. This format will print all keywords, the title, description and path information for the entry. The Alternate print format will print about 20 thumbnails per page. This option can be selected via the File - Select Printer function.

Prior to selecting any of the above options, a printer should be selected and the desired typeface and size should be selected.

Print Problems:

PixFolio relies on Windows print drivers to implement many aspects of printing. If you experience problems (Error during NEWFRAME, GPF's, corrupted printouts, etc.), review the following discussion:

1. Sufficient disk work space. Some print drivers require that you have as much as 4 or 5 megabytes of free disk space per page of print. This can be even more if the default thumbnail size is reduced.
2. Sufficient printer memory. Your printer should be able to print a page of text including some included graphics but printouts such as the catalog thumbnail print or a full page print of a photographic image probably will require additional printer memory. This is especially true of laser printers where you may need 4 megabytes or more. If you have additional memory installed in your printer, make sure that you have informed the printer driver that the memory is installed.
3. Do you have sufficient memory in your PC? Many print drivers build "Metafiles" in memory before sending the data to the printer. The print operation may fail if there is not enough memory or your swap file is not large enough.
4. Do you have the latest printer drivers for your printer? If you have had Windows installed for some time, there may be newer versions of print drivers available for your printer that correct problems and/or offer faster or more efficient printing, possibly with lower hardware requirements. Contact your printer manufacturer or Microsoft for updated printer drivers. Drivers also, can be found on on-line services such as CompuServe or on many BBS's.
5. In some cases, a printer driver for another printer may work better. This is especially true in cases where a printer "emulates" some other printer. For example if you have a hypothetical "Ajax" laser printer that emulates a Hewlett Packard Laserjet III, the HP drivers may work where the Ajax drivers don't.
6. When printing to a Network printer, bypassing Print Manager may improve printing time and reduce memory and disk space requirements on your PC. There is an option in Print Manager that controls this.

Object Embedding and Linking

Many Windows 3.1 applications support Microsoft's **Object Embedding and Linking (OLE)** protocol as a server, client or both. PixFolio is an OLE server application and can supply images to an OLE Client application such as Windows Write or Word For Windows 2.0. To determine whether an application is an OLE client, look to see whether any of the following menu entries are present in your application's **Edit** menu:

Paste Special, Paste Link, Links, Object or Insert Object.

If your application is an OLE client, it can import images from PixFolio using OLE. An image in PixFolio can be included in your application by using a Link (via the Paste Link command) or embedding the image using the Insert Object command.

Links

In order to link to a PixFolio image, PixFolio must be started and the image viewed as you normally would. Then copy the image to the clipboard and then in your application, select **Paste Link**. The image will then be inserted into your application. Your application will maintain a link to Pixfolio so that if the image is changed, it will be automatically updated in your application.

Embedding

Selecting the **Insert Object** command on your application's Edit menu and then selecting **PixFolio Image** will automatically start PixFolio, if it is not already running, start a Thumbnail view and then you can double click with the left mouse button on the desired Thumbnail to view the image, then select **Update** from the File menu to insert the image into your application. Subsequently, you can double click on the embedded image in your application to start Pixfolio to edit the image.

Refer to your application's documentation for more specific information as to how OLE is implemented.

Run-time Options

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

Options Menu

Auto Dither

If your display driver is not capable of displaying 256 colors, for example the standard VGA driver can only display 16 colors, you may turn **AUTO DITHER** on to cause images that contain more than 16 colors to be automatically dithered *for display only*. The original image data containing 256 colors is not modified and if the file is saved, none of the colors will be lost.

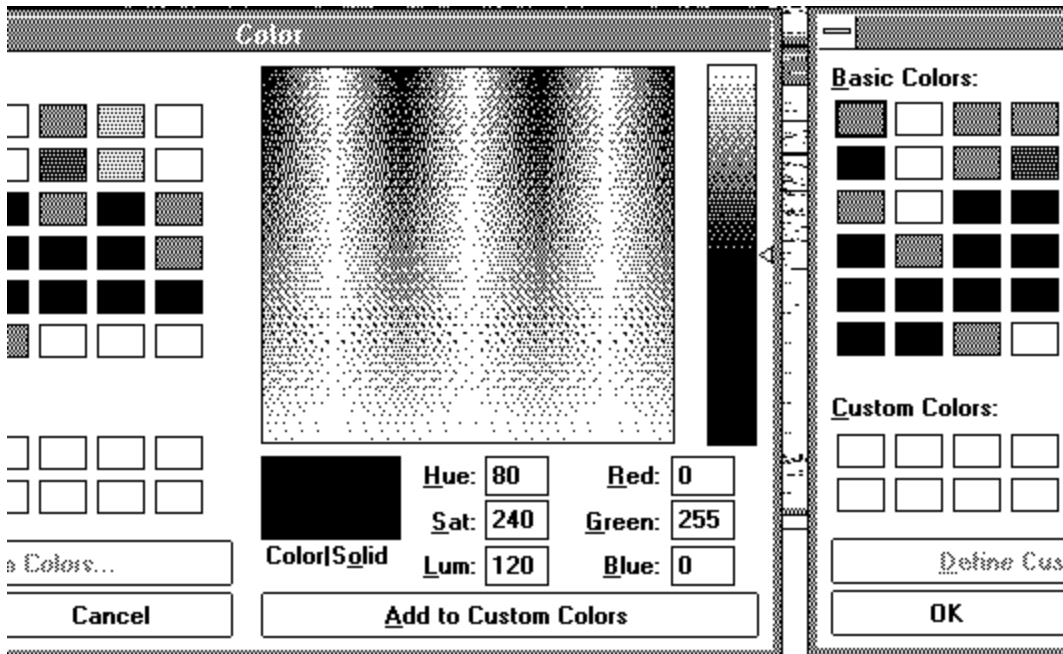
If you wish to dither an image and save it as a dithered image you must select one of the **Palette Dither** options to dither the image even if it has been displayed as dithered because of Auto Dither being turned on.

Dithering is slow so you may wish to keep this option turned off until you specifically wish to view an image dithered. If you have a 256 color driver, the Auto Dither option will cause 24 bit color images to be dithered but you should be warned that this may take a very long time, perhaps as much as an hour.

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. The background color is also used to paint the surface of an image created with the File New command.

A dialog box is presented which enables the user to set the background color to whichever color is desired. An option (ColorSolid) in this dialog box 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 by the video display.



You can define custom colors which will be saved for the next execution of PixFolio.

DIB to Screen

PixFolio normally 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 slower, especially when it is a 24 bit color images. However, initial creation of the DDB can also be time consuming. 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.

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

PixFolio Startup Options

Default Catalog: pixfolio [OK]

Default Extensions: *.BMP; *.RLE; *.GIF; *.PCX; *.TIF; [Cancel]

Default Directory: [Cancel]

Center Image DIB to Screen
 Display Warnings Fix TIFF
 Solid Background Auto Dither
 Display Status Bar Verify Catalog
 Stretch to fit window Disable DRW
 Disable CGM Disable WPG
 Disable TIF/EPS

Default Options Dialog

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. When this option is on, PixFolio will not attempt to create a Device Dependent bitmap for display but will instead paint directly to the screen. This may be helpful if memory is limited and there is not enough memory to create a separate Device Dependent bitmap.

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.

Auto Dither

Determines whether images will be automatically dithered if their color resolution is greater than that of the display.

Verify Catalog

If it is suspected that the catalog index has been corrupted, turning this option on temporarily will force the catalog index entries to be verified with the matching catalog record. Invalid indexes will then be removed.

Display Status Bar

This option controls whether the status bar will be displayed initially.

Stretch to Fit Window

This option controls whether images will be created with the "Stretch to Fit" option active. If active, the image will be stretched or shrunk (keeping the proper aspect ratio) to fit the current window's size.

Disable xxx

Several image formats supported by PixFolio are also supported by Graphics Import Filters shipped with WINWORD and Aldus Pagemaker. If you want to use these filters instead of the built in support for these formats, you can disable the PixFolio read routine. In this case, PixFolio will utilize the graphics filters defined in WIN.INI in the section: [MS Graphics Import Filters]. An example is reproduced below:

[MS Graphic Import Filters]

```
Windows Metafile(.WMF)=D:\WINDOWS\MSAPPS\GRPHFLT\wmfimp.ft,WMF
DrawPerfect(.WPG)=D:\WINDOWS\MSAPPS\grphflt\wpgimp.ft,WPG
Micrografx Designer/Draw(.DRW)=D:\WINDOWS\MSAPPS\grphflt\drwimp.ft,DRW
AutoCAD Format 2-D(.DXF)=D:\WINDOWS\MSAPPS\grphflt\dxfimp.ft,DXF
HP Graphic Language(.HGL)=D:\WINDOWS\MSAPPS\grphflt\hpglmp.ft,HGL
HP Graphic Language(.PGL)=D:\WINDOWS\MSAPPS\grphflt\hpglmp.ft,PGL
Computer Graphics Metafile(.CGM)=D:\WINDOWS\MSAPPS\grphflt\cgmimp.ft,CGM
Encapsulated Postscript(.EPS)=D:\WINDOWS\MSAPPS\grphflt\epsimp.ft,EPS
Tagged Image Format(.TIF)=D:\WINDOWS\MSAPPS\grphflt\tiffimp.ft,TIF
PC Paintbrush(.PCX)=D:\WINDOWS\MSAPPS\grphflt\pcximp.ft,PCX
Lotus 1-2-3 Graphics(.PIC)=D:\WINDOWS\MSAPPS\grphflt\lotusimp.ft,PIC
AutoCAD Plot File(.PLT)=D:\WINDOWS\MSAPPS\grphflt\adimport.ft,PLT
Excel Chart(.XLC)=d:\aldus\usenglish\filters\CHARTIMP.FLT,XLC
```


Note: in the example above, "HP Graphic Language" is listed twice because there are two file extensions in use for these files. You may have to edit WIN.INI to do this. However, the WIN.INI section should be automatically established whenever you install an application like WINWORD that includes the filters.

All of these options can be set via the **Options Default Options** command.

Command Line Options

Several command line options can be specified that affect the operation of PixFolio. Options that can be specified are:

1. Initial image to display.
2. Initial catalog
3. Display thumbnail view.

The format of command line options is:

PIXFOLIO.EXE <file name>, <catalog name> <-v>

"file name" is the fully qualified pathname of an image to display. If "file name" is a catalog file, i.e. the extension is "CIX" or "CÄT" then a thumbnail view of that catalog will be opened initially.

"catalog name" is the title of the catalog to be used initially. If present, it will override the default catalog.

"-v" or "/v" can be specified to start a thumbnail view.

Examples:

PIXFOLIO.EXE abc.gif	(load "abc.gif" on startup)
PIXFOLIO.EXE ,Test Catalog	("Test Catalog" will be the initial catalog)
PIXFOLIO.EXE ,Clipart -v	("Clipart" will be the initial thumbnail view)
PIXFOLIO.EXE -v	(the default catalog will be the initial view)

Removable Media

PixFolio normally considers fixed media such as hard drives and network drives as primary storage media and "removable" drives such as floppy disks as "backup" locations. In some cases, for example when using a Bernoulli box, which DOS considers as "removeable", you may wish to change the way that PixFolio treats such drives.

If you wish to consider a particular drive as a primary storage location, with Notepad or some other text editor, add the following option to the [PixFolio] section of your WIN.INI file:

Primary Drives=x,... where "x" is the drive letter of the drive to be considered "fixed". More than one drive can be thus overridden; you do not need a comma after the last drive.

If you wish PixFolio to treat a drive as "removable", for example, if you want to store backup copies on a network drive, add the following option to your WIN.INI file:

Backup drives=j,... As in the above case, you do not need the comma after the last drive letter.

Example:

Bernoulli Drives E and F are to be considered as primary storage even though DOS says they are removable. Network drives J and K are to be considered "backup" drives.

Primary Drives=E,F

Backup Drives=J,K

The Catalog Select Catalog command provides for specification of a volume ID for a catalog. If present, the volume ID will be checked before opening the catalog.

Other INI file options

The INI file can contain several options which can only be changed by the user editing the INI file:

PrtCatExt={Yes, No}

Controls whether the file name extension will be printed with the file name when printing a catalog.

PrtCatTop={Yes, No}

Controls whether the file name will be printed on top of the thumbnail in a catalog printout.

Print Frame={Yes, No}

Controls whether a rectangular frame will be drawn around thumbnails in printed catalogs.

Use Net Names={Yes, No}

Controls whether UNC network path names, e.g. "\\SERVER\VOLUME\..." will be stored in place of normal DOS file paths in the catalog and INI file for catalog paths. This option will default to yes. PixFolio will also store local pathnames as UNC names if the device that they reside on is shared on the network.

Profile Options

PixFolio will normally keep its configuration options following a [PixFolio] header in your WIN.INI file. In some cases, this may not be desirable; for example in a network environment where several different users are using PixFolio. As an option, PixFolio may be configured to keep its options in an alternative location. If a file named "PIXFOLIO.INI" exists in the subdirectory that PixFolio is loaded from or in some directory in the PATH, PixFolio will maintain its options there and ignore WIN.INI. In this case, references to WIN.INI mentioned in this documentation will actually refer to PIXFOLIO.INI.

Network Issues

Pixfolio by default will store the pathname of files and catalogs using the UNC filenames. For example instead of "G:\GRAPHICS\GIFS\TEST.GIF" the name might be stored as "\\SERVER1\SYS\GRAPHICS\GIFS\TEST.GIF". Network path names are used for files located on a file server (such as in a Netware environment) or on another PC in a peer-to-peer network such as LAN Manager or Windows for Workgroups. Also, if your PC is on a peer-to-peer network and the path is shared on the network, local file names will be stored as network names.

This feature enables PixFolio to access files wherever they are located on the network whether they are on a server, another PC or your local PC. Likewise, other users can access files on your PC when you are sharing the path.

There are a couple of points to keep in mind when operating on a network. The foremost is that network names, once established are absolute. The name of a server, shared path or local machine name cannot be changed without regard to network names already stored in a catalog. If a server, name, share name or machine name is changed, existing network names will no longer be accessible. Likewise, if you discontinue sharing a local directory, other users will no longer be able to access files in it.

If this feature is not desired, it can be disabled via use of the WIN.INI/PIXFOLIO.INI option "Use Net Names = No" profile option. Turning off the option will not change any names currently stored in a catalog however, if they are still accessible, they will be changed to local device names, e.g. "G:\GRAPHICS\GIFS\TEST.GIF" whenever they are updated.

In case of problems

Here are some frequently encountered problems that you may encounter.

Images displayed with only 16 colors.

If your video driver only supports 16 or 20 colors, images that contain more than 16 colors will not render very well; the images will be splotchy and generally lacking the color tone that you would expect. The solution is to use a video driver that supports 256 colors or more. Note that the standard VGA driver shipped with windows only supports 20 colors. Of course the video card that you are using must support more than 16 colors in the default resolution of 640x480.

An alternative is to turn on the Auto Dither option. This will improve the appearance of images that contain more than 16 colors at the expense of some additional processing time to dither the image.

24 Bit images take an extremely long time to draw.

When using a 256 color driver and you attempt to display an image with 24 bit color values, it may take several minutes for Windows to display the image and your machine will be "locked up" while this is happening. To get around this, you can either turn on the Auto Dither option or you can install a high color or true color video driver (assuming that your video hardware supports these modes).

Printing results in errors

Printing a page of thumbnails requires a very large amount of disk work space. The disk work files will be created in the directory pointed to by your "TEMP" environment variable or in the Windows directory. For successful printing, make sure that your "TEMP" environment variable points to a directory on a drive that has the most free disk space. The amount of disk space required is proportional to the number of thumbnails on a page, so if you have limited disk work space, limit the number of thumbnails on a page by keeping the thumbnail large and use generous page margins. These can be set via the "Options" button in the Print Dialog.

Corrupted Catalogs

Corrupted catalog files can result in strange behaviour, including display of "garbage" names, errors when attempting to open a catalog, display of just a small subset of the entries you have cataloged, etc. You also may receive messages that the index does not match the catalog. A catalog could be corrupted for a variety of reasons including: hardware problems, a system crash while PixFolio is running, or a program bug.

The first thing to do when attempting to recover a corrupted catalog is to make backup copies of the *.CAT and *.CIX files so that you can restore the files in case one of the methods below

The Catalog Rebuild Index command is one method to recover a corrupted catalog. This command will also free up any unused disk space occupied by the catalog. To do this, all you have to do is select Rebuild Index from the Catalog menu.

If you cannot open a catalog or select it via Catalog Select Catalog, you can try to force a rebuild of the catalog index by deleting the *.CIX file using File Manager or the DOS command line. When the catalog is subsequently selected and opened, the index will be rebuilt from data in the

*.CAT file. Assuming that the *.CAT file is readable, the only data that you will lose is the user defined sequence information.

You have forgotten the password for a catalog

If you forget the password for a catalog, you must rebuild the catalog or contact ACK Software for help in changing the password.

Files cannot be located

PixFolio should always be used to move files that are cataloged so that the catalog will be updated with the new location of the files. If files are moved using DOS or File Manager, PixFolio will not know where the files are located.

If you do move a group of files manually, you can cause the catalog to be updated by performing a Catalog Build on the directory containing the new location. Do not turn on the "Force Update" option and the Build will very quickly update only the location of the files without reading in the images and recreating the thumbnail image.

In a network environment, changing the name of your computer or the share names for shared network directories could cause catalog entries to become invalid. The solution is to perform a catalog build on the directories affected as in the case above.

PixFolio uses the volume label of a hard drive to help locate files. This enables PixFolio to find files even though the drive letter has changed so long as the volume label of the disk has not changed. This method is used when accessing catalogs on a CD-ROM and the CD-ROM drive is different on your machine than on the machine that the catalog was created on.

Be very careful when changing volume labels or share names for disks that contain images cataloged by PixFolio.