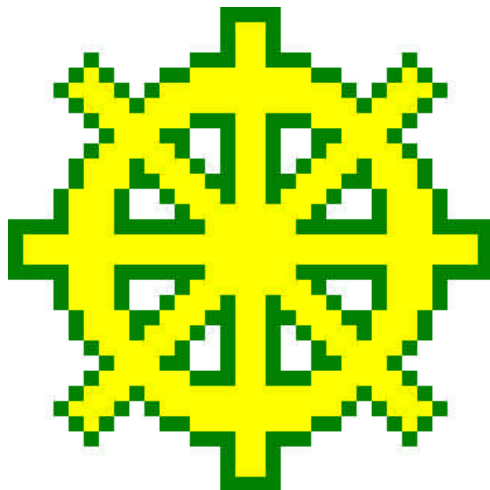




A ROM production



## **Navigator v1.10**

**Viewer for image and movie files**

**User guide**

**Written by J.Romaya**

**4<sup>th</sup> May 2005**

**Navigator** is provided to you free of charge under the following conditions: -

### **1) Copying**

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### **2) Liability**

The package is distributed as it is, without any warranty implied. No liability is accepted for any damage or loss resulting from the use of this program.

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**Navigator** has been developed with the aid of the Independent JPEG Group's JPEG software and the libtiff software package which was written by Sam Leffer and others.

## Update history

v1.02 25<sup>th</sup> Feb 04.

First public release. **Navigator** handles ".jpg" pictures and ".avi" movies.

v1.03 8<sup>th</sup> Mar 04.

Added ".wav" audio files and ".tif" picture files.

v1.04 11<sup>th</sup> Mar 04.

Added ".mov" QuickTime movies. Improved memory management. Added picture rotation. Greyscale ".jpg" images now load properly.

v1.05 29<sup>th</sup> Mar 04.

- 1/ Bugfix fix - ".mov" files are now correctly processed by MovieThumbnail.
- 2/ The "Ascend directory" button has been moved from the top right to the top left of the "Directory" screen.
- 3/ A new "Close **Navigator**" button has been added in the top right of the "Directory" screen.
- 4/ Rotating a picture before the thumbnail has been loaded no longer causes a "divide" error.
- 5/ In variable display mode, changes only take place if a change is required.
- 6/ Thumbnails are now shown without a black line at the top in Windows98.
- 7/ Extremely long or extremely tall pictures now display correctly in Windows98.
- 8/ Screen is cleared correctly when pictures are rotated in Pan mode.

v1.06 29<sup>th</sup> Apr 04.

- 1/ Added **NavExpress** utility and fast thumbnail loading in **Navigator**. **MovieThumbnail** now no longer necessary.
- 2/ **Navigator** ignores any directory named "NavExtras". You can use this to put extra things on a **Navigator** CD which will not appear on the **Navigator** display.
- 3/ Added **Setup** utility for automatic installation on Windows 95/98/2000/XP.
- 4/ **Navigator** and **NavRename** should now load correctly in Windows95. There was a previous load error in which ADVAPI32.dll function SetEntriesInAclA was missing.
- 5/ Movie playback of certain .avi files used to fail with a "Seek()" error 0x80004001. This no longer happens.
- 6/ If **Navigator** encounters an error during a slideshow it now goes on to the next entry, rather than exiting from slideshow mode.

v1.07 7<sup>th</sup> May 04.

- 1/ Slideshow timing has been improved.

v1.08 21<sup>st</sup> Jan 05.

1/ Added still picture with audio track functionality.

2/ Added **NavRetime** utility.

v1.09 18<sup>th</sup> Feb 05.

1/ Added print function and save to postscript file.

v1.10 4<sup>th</sup> May 05.

1/ Added zoom function.

## **Table of contents**

### **Basics**

Introduction	1
Getting started	1
Exiting from <b>Navigator</b>	3
<b>Navigator</b> display modes	3
<b>Directory</b> mode	4
<b>Interactive</b> mode	5
<b>Slideshow</b> mode	5
<b>Zoom</b> mode	6
<b>Pan</b> mode	8
Picture rotation	10
Movies	12
Movies – upgrading your system	12

### **Printing**

Printing the current picture	13
Printing a catalogue	15
Setting print margins	16
Print settings	17
Picture print settings	17
Pan print settings	18
Catalogue print settings	19
Saving as a PostScript® file	21
Editing a PostScript® file	22

### **Advanced operations**

Advanced operations	24
<b>Variable resolution</b> mode	25
<b>Verbose</b> mode	27
<b>GraphBuilder</b> mode	28
Web distribution	29
Creating an Auto-play CD	30
Troubleshooting	31
Summary of keyboard and mouse button commands	34

### **Other programs**

Helper utilities	36
<b>Setup</b>	36
<b>NavRename</b>	38
<b>NavRetime</b>	43
<b>NavExpress</b>	50

## Introduction

**Navigator** is a program for viewing picture, movie and audio files and navigating through the directories on your computer's hard disk. You may view the pictures and movies full screen or listen to an audio file and you can step through each item automatically in a slideshow. **Navigator** is ideal for pictures and movies taken with a digital camera.

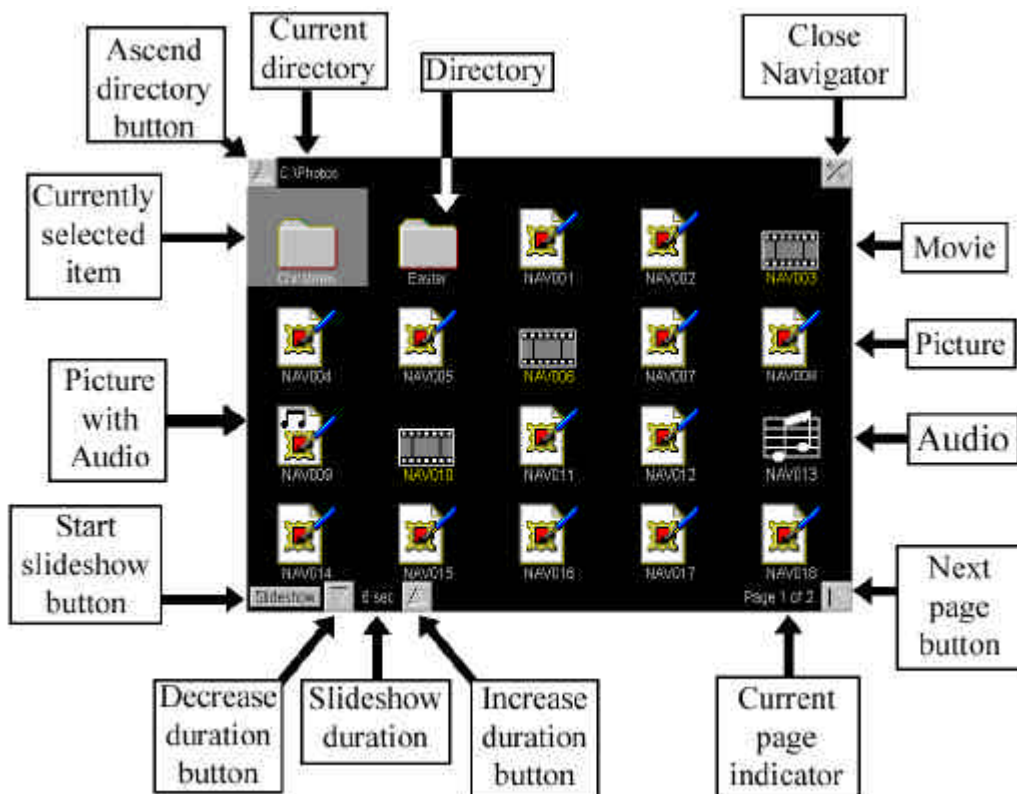
**Navigator** is a program for Windows® 95/98/2000/XP running on a PC. It will not work on a Mac. **Navigator** recognizes only ".jpg" and ".tiff" picture files, ".avi" and ".mov" movie files and ".wav" audio files. You can use the **Setup** helper utility described later in this manual to install the **Navigator** package on your Windows 95/98/2000/XP system.

## Getting started

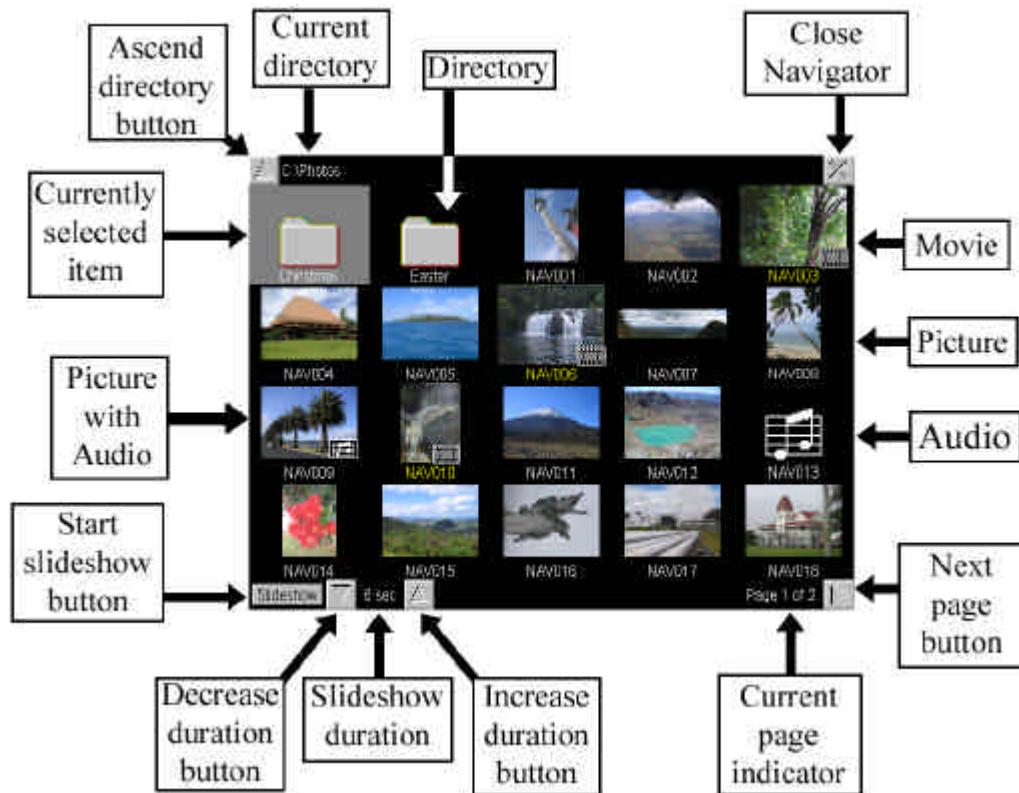
The **Navigator** program icon looks like this:-



When you first run **Navigator** you may see a dialog asking whether **Navigator** needs to access the internet. The answer is no, **Navigator** never needs to access the internet. Otherwise when you run **Navigator** you should first see the **Directory** mode screen:-

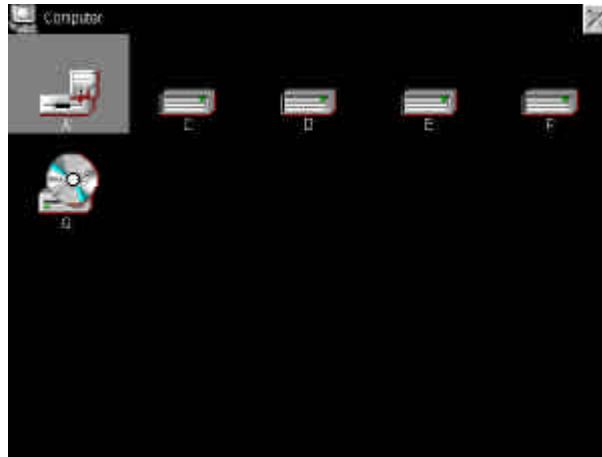


Then, after a while, the program reads in the picture and movie files and displays them in miniature on the **Directory** mode screen. Audio files are shown as a music symbol:-



Here you can see five types of item; **Directory**, **Picture**, **Movie**, **Audio** and **'Picture with Audio'**. Directories appear first, followed by the other items in alphabetical order. However, any directory with the specific name "NavExtras" will not appear. Movies appear with a film icon in the lower right and their names are drawn in yellow. If a movie contains only audio data it is redrawn as Audio. The **'Picture with Audio'** item actually represents two files which have the same name; one file contains the picture and the other contains the audio. If you want to combine a picture with a soundtrack in this way then give them both the same name and Navigator will recognize this and combine them for you.

There is also a fifth type of item, **Disk**, which you see if you repeatedly click on the "Ascend directory" button until you reach the top level of your computer:-



Here you can see three different types of **Disk**, A: is a floppy disk, C: to F: are fixed hard disks and G: is a CD drive.

You may find the loading of the miniature thumbnail files very slow. This can be especially noticeable on a slower PC, when there are many image files, or especially when you are working from a CD. If this is a problem, try using the [NavExpress](#) program described later in this manual.

### **Exiting from Navigator**

To exit from the program, get into **Directory** mode and press the 'Esc' key or click on the "Close Navigator" button.

### **Navigator display modes**

There are four basic [Navigator](#) display modes:-

- 1/ **Directory** mode. Use this mode to navigate around your computer and view pictures and movies.
- 2/ **Interactive** mode. Use this mode to view individual pictures and movies and listen to audio.
- 3/ **Slideshow** mode. Use this mode to view a sequence of pictures, audio and movies as an automatically running slideshow.
- 4/ **Zoom** mode. Use this mode to zoom into pictures.
- 5/ **Pan** mode. Use this mode to look in detail at very wide or tall pictures.



## **Directory mode**

This is the mode shown above when **Navigator** first starts up. Use this mode to navigate around your computer, view pictures and movies and listen to audio. There is always a currently selected item in **Directory** mode. It is highlighted in grey. You can move the currently selected item around by using the cursor keys up, down, left and right. You can go down into a directory by making it the currently selected item and then pressing the return button, or by clicking on it with the mouse. You can ascend into the next directory up by clicking on the "Ascend directory" button with the mouse or by holding down the "Ctrl" key and pressing the cursor up button. Sometimes there are too many items to display on one screen. If this is the case you will see the "Current page indicator" and buttons to go the next page and/or previous page. Simply click on these buttons to look at other pages. You can also hold down the shift key and press the cursor left/right keys to navigate through the pages.

You can exit from **Navigator** by clicking on the cross in the top right hand corner of the **Directory** screen.

## **Interactive mode**

You can display a picture or movie or listen to audio either by clicking on it with the mouse, or by making it the currently selected item and then pressing the "Return" key. When you do this, a picture will appear full-screen or a movie will play in full screen size or you will listen to the audio file (in which case the musical score symbol appears full-screen). The movie and audio will repeat indefinitely. While you are in **Interactive** mode you can go on to the next item by pressing the cursor right key or you can go to the previous item by pressing the cursor left key. You can pause audio or a movie by pressing the spacebar and resume playing by pressing the spacebar again. You can exit from **Interactive** mode and go back into **Directory** mode by pressing the "Return" or "Esc" keys or by clicking the mouse button.

## **Slideshow mode**

Use this mode to automatically view the full sequence of pictures and movies. You can set the slideshow duration when you are in **Directory** mode by clicking on the "Increase slideshow duration" and "Decrease slideshow duration" buttons with the mouse. Alternatively, hold down the shift key and press the cursor up and down keys. You can start a slideshow at the current item by clicking on the "slideshow" button with the mouse. You can also start a slideshow from any mode by pressing the "S" key.



While you are in **Slideshow** mode you can pause the show at any time by pressing the spacebar. Pressing it again resumes the show. You can also go back into **Interactive** mode by pressing the cursor left and right keys which display the previous and next items respectively. Then when you want to resume the slideshow, just press the "S" key.

You may also enter **Pan** or **Zoom** mode during a slideshow. If a very wide or tall picture is being displayed, you can press "P" key to enter **Pan** mode or press the "Z" key to enter **Zoom** mode. When you have finished looking at the picture in detail you can again press "S" to resume the slideshow.

You can stop a slideshow and go back into **Directory** mode by pressing the "Return" or "Esc" keys or by clicking the mouse button.

Remember to switch off your screensaver and power-saving during a slideshow, otherwise the display will go black after a while. You can do this from the "Display" control panel of Windows.

## **Zoom mode**

Go into **Zoom** mode any time you want to look at a part of a picture in detail. You can go into **Zoom** mode by pressing the "Z" key when you are in **Interactive**, **Slideshow** or **Pan** mode. When you enter this mode the mouse pointer changes from an arrow  to a cross . Consider the picture below:-



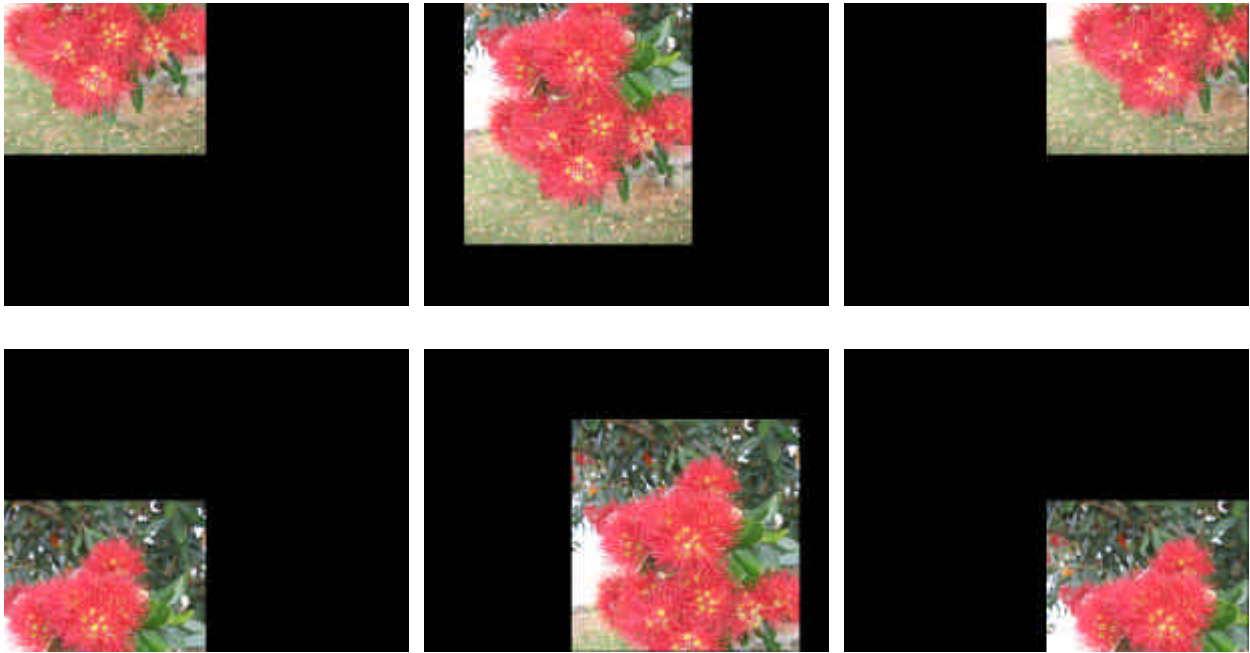
Press the "Z" key to enter **Zoom** mode and then click the left mouse button over the area you want to enlarge (or simply press the "+" key on the keyboard):-



You can also zoom back out by clicking the right mouse button over the point you want to reduce (or simply press the "-" key on the keyboard). Or you can reset to the unzoomed image at any time by holding down the "Ctrl" key and either clicking the left mouse button or pressing the "+" key:-



While you are in **Zoom** mode you can move the picture around to look at different parts of it. You can do this by pressing the cursor keys (up/down/left/right). Holding down the shift key as well makes a bigger move. Alternatively you can hold the left mouse button down and after a short period of time you can drag the image around using the mouse. However, there is a constraint on dragging the image around; at least some part of the image (if only an extreme corner) will remain in the centre of the screen and the image cannot be dragged past this point. This is done so that you cannot drag an image completely off the screen and lose it. The images below have been dragged around in this way:-



You can exit from **Zoom** mode and return to **Interactive** mode by pressing the "Z" key again or by pressing the "Return" key. Alternatively, hit the "Esc" key to return to **Directory** mode.

## **Pan mode**

Go into this mode if you are displaying a very wide or tall picture and you want to look at it in detail. You can go into **Pan** mode by pressing the "P" key when you are in **Interactive**, **Slideshow** or **Zoom** mode. Consider the tall picture below:-



The image does not fit the screen and there are blank areas of screen to the left and right. Now, when you press the "P" key and enter **Pan** mode the picture is expanded so that it fills the full width of the screen. Of course, now you lose the top and bottom of the image:-



However, when you are in **Pan** mode, you can use the cursor up and down keys to view the rest of the image...

(Cursor up)



(Cursor down)

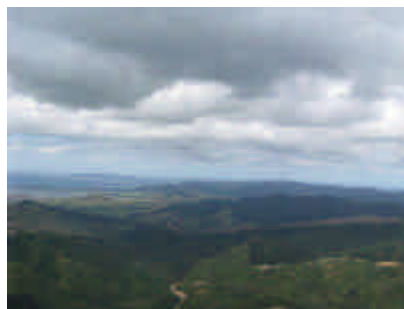


You can move more quickly by holding down the shift key and pressing the cursor keys.

You can do the same thing with a very wide picture:-



Pressing the "P" key goes into **Pan** mode and the picture expands to fill the full height of the screen:-

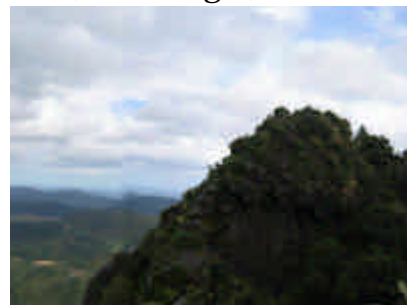


This time you can move left and right with the cursor keys:-

(Cursor left)



(Cursor right)



You can get out of **Pan** mode and back into **Interactive** mode by clicking the mouse button or by pressing the "P" or "Return" keys. Alternatively, hit the "Esc" key to return to **Directory** mode

## Picture rotation

Sometimes you will have taken a picture which appears rotated. Take a look at image NAV013 which is highlighted as the current item below:-



You can see that it is rotated on its side. But if you press the "R" key, the image will rotate by 90° clockwise:-



Press "R" again for a further 90° rotation:-



A further press brings the image into the correct orientation:-



You may rotate an image in this way using the "R" key while you are in any of the display modes. However, if you rotate an image while in **Slide** mode you will go into **Interactive** mode. You cannot rotate movies however.

If you rotate an image in this way the results are only temporary, the image will revert to its original orientation if you go into another directory or quit **Navigator**. Other programs will not recognize the rotation.

However, you can mark a particular image for rotation in another way. Consider the file "NAV016.jpg". If you rename it to "NAV016.090.jpg" it will always be displayed by **Navigator** with a 90° clockwise rotation. If you rename it to "NAV016.180.jpg" it will always be displayed by **Navigator** with a 180° rotation. And if you rename it to "NAV016.270.jpg" it will always be displayed by **Navigator** with a 270° clockwise rotation (which is the same as a 90° anti-clockwise rotation). Although the name has been changed, it will still appear as "NAV016" on the **Navigator** screen.

You may rename ".jpg" and ".tif" image files in this way, renaming ".avi" and ".mov" movie files will have no effect. You should also remember that renaming the files will only rotate the image when you view it in **Navigator**, not when you view it with other programs.

You may also decide to rotate and then resave image files using an image-processing program but you should be aware that there are disadvantages to using that method. Firstly there may be a slight change in image quality, particularly if you save the rotated image as a ".jpg" file. Secondly, you will change the file modification time, which can be a useful piece of information as it (for example) often records the time a picture was taken with a digital camera. Finally you may unwittingly destroy extra non-visual information which has been stored in the file. None of these disadvantages apply to renaming the file as described in the previous paragraph.



## **Movies**

If you want to play movies you must set up your PC appropriately. It may be necessary to download and install extra operating system components to view certain types of movie. In general you can view any .avi movie which you can view in Windows Media Player. You must install QuickTime on your system if you want to view ".mov" movies.

### **Movies – upgrading your system**

If you cannot view a particular movie you may be able to upgrade your system so that you can show it. However, you should only do this if you are experienced with and feel confident about upgrading the Windows operating system. If you feel at all unsure about upgrading you should seek professional advice. You should be aware that even if you go through the upgrades listed below you may still be unable to view the movie because it has been encoded in a way that is not known to your operating system. In that case you will get an error message when you try to play the movie to the effect that it uses an unrecognized codec. If this happens you should seek further professional advice on where you can obtain the appropriate codec for your operating system. Beware of installing third party (i.e. not Microsoft) codecs on your system; they can cause problems.

If you decide to upgrade your system yourself then go to the main Microsoft® website: -

<http://www.microsoft.com>

From there you can download software to upgrade your operating system. Key operating system components for viewing movies are:-

- 1/ DirectX®
- 2/ DirectX® media runtime
- 3/ Windows Media® player
- 4/ Video and audio codecs.

You can upgrade most of these by going to "Windows Update" on the main Microsoft® website and applying the "Critical updates and service packs" and "Windows" categories.

QuickTime is available for download from the main Apple website. Make sure you install the full version, or you will not be able to make movie thumbnails or print movie frames:-

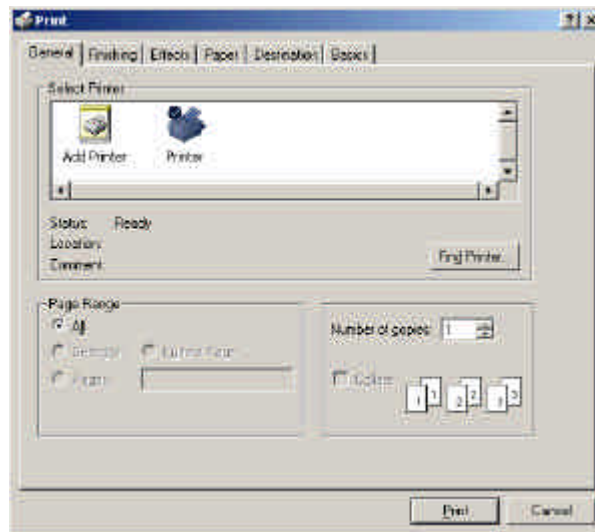
<http://www.apple.com>

Microsoft®, Windows®, Windows Media® and DirectX® are trademarks of the Microsoft Corporation, One Microsoft Way, Redmond, Washington 98052-6399 U.S.A.

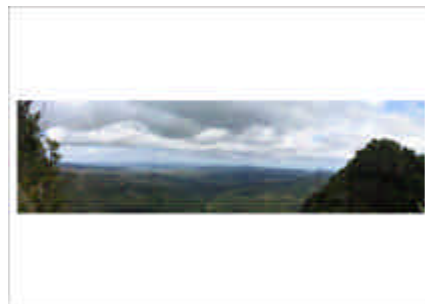
QuickTime® is a trademark of Apple Computer, Inc., 1 Infinite Loop, Cupertino, CA 95014, USA.

## **Printing the current picture**

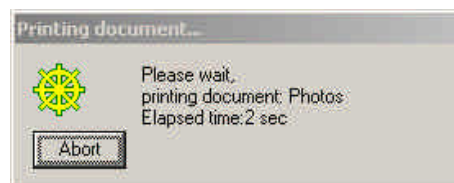
When you are in **Interactive**, **Pan**, **Zoom** or **Slide** modes you can print out the current picture by holding down the 'Ctrl' key and pressing the 'P' key. The print dialog appears:-



From here you can select your printing options in the usual way (i.e. which printer to use, paper type, print quality etc...) and then click on "Print" to print the image. The current picture will be printed at the highest resolution available:-



While printing is going on you cannot do anything else. During printing you will see a dialog informing you that printing is going on and giving you the opportunity to abort the print if you want to. A print job may take some time to complete and the dialog lets you know how long the current job has taken:-



If you print when you are in **Slide** mode, the slideshow is paused and you must then restart the slideshow after printing by pressing the "S" key. If you print a picture with audio or a movie, it is paused temporarily while printing takes place after which it automatically restarts. A movie is always printed as the currently displayed frame. If you print a picture while in **Pan** mode you will get a magnified printout over several pages: -



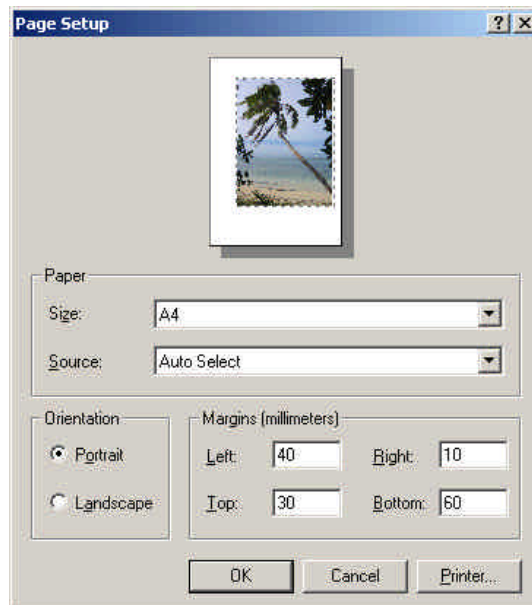
## **Printing a catalogue**

If you print from **Directory** mode you will get a catalogue of miniature pictures of all items in the current directory. Folders however are not shown. The catalogue may extend over several pages:-



## **Setting print margins**

While you are displaying a picture but before you print you can set the print margins by holding down the "shift" key and pressing "P". The "Page Setup" dialog will then appear:-



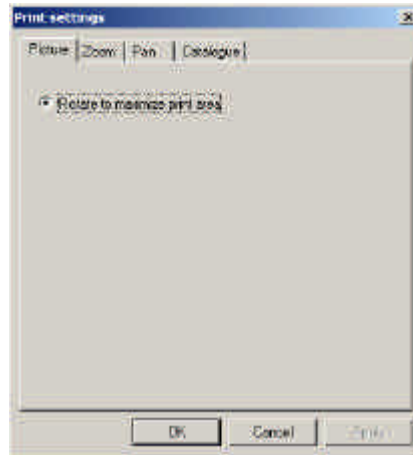
You can set the page margins here and those values will be used each time you print a picture. If you print on both sides of the paper, the left and right margins will be swapped for alternate page numbers so that you can set a constant width along the bound side of the document. You may also select the printer you want to use, the paper size and paper source and the orientation of the paper.

## **Print settings**

You can adjust various print settings by holding down the "Control" and "Shift" keys and pressing the "P" key to display the "Print Settings" property sheet. There are different settings for "Picture", "Zoom", "Pan" and "Catalogue printing".

### **Picture print settings**

The "Picture" settings are shown below: -



The "Picture" settings have a button which controls whether a picture is rotated by 90 degrees in order to maximize the print area. The default value with the button checked maximizes the print area:-



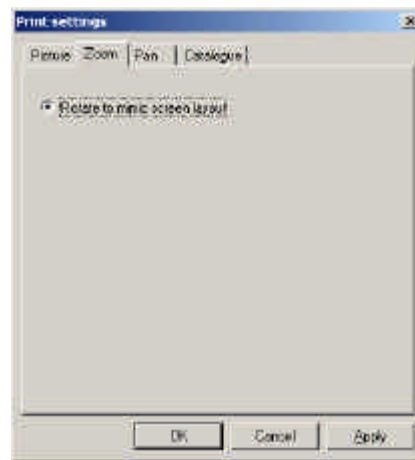
Print area maximized



Print area not maximized

## **Zoom print settings**

The "Zoom" settings are shown below: -



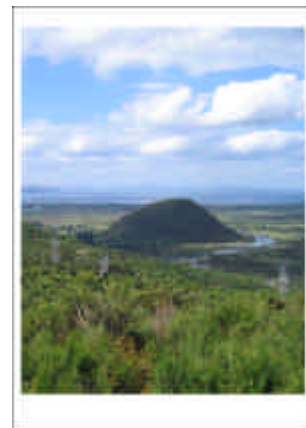
The "Zoom" settings have a button which controls whether a picture is rotated by 90 degrees in order to mimic the screen layout. The screen layout is usually "Landscape" mode (i.e. the screen width is greater than the screen height). However, the print layout may be different to this (i.e. "Portrait" mode, when the screen width is smaller than the screen height). If this is the case then the picture can be rotated by 90 degrees to mimic the screen layout. The default value with the button checked mimics the screen layout: -



Screen layout

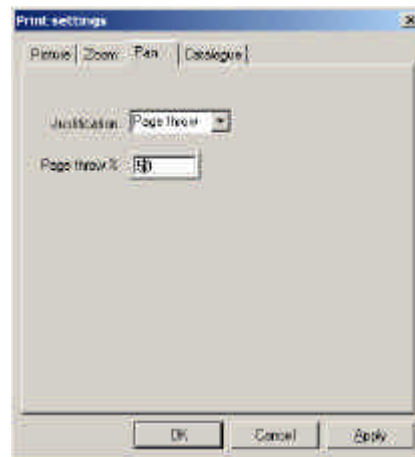


Mimic screen layout



Do not mimic screen layout

## **Pan print settings**



The "Justification" control can take four values; "Left/Top", "Right/Bottom", "Centred" and "Page throw" which allow you to control where the page endings are:-

Left/Top justification



Right/Bottom justification



Centred justification

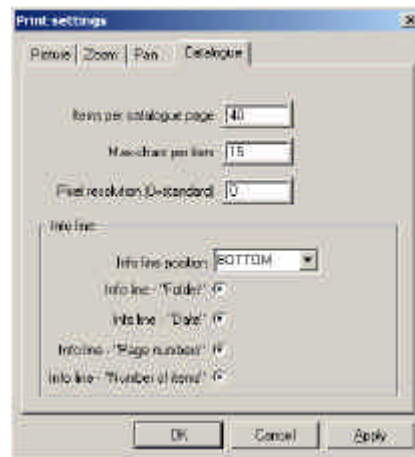


Page throw 50%





## **Catalogue print settings**



**Items per catalogue page** controls how many images appear on each catalogue page. It is a minimum number – a value of 40 means that at least 40 items will appear per page. The size of each image changes according to the value you select here: -



20 items per page



40 items per page

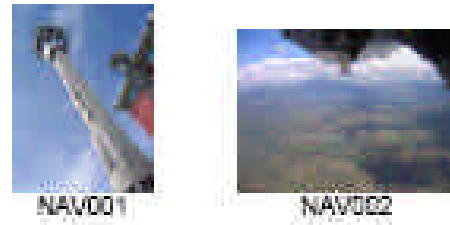
**Pixel resolution** controls the image quality of the miniature pictures on each catalogue page (but not the onscreen display). The standard value, 0, uses the same resolution as you see on the screen which typically corresponds to a resolution value of about 100. If you select a new value then **Navigator** will thereon reload all miniature images at the new resolution for printing in the catalogue. Reloading the miniatures may take a long time and you must wait until all the miniatures are reloaded before you print the catalogue. If you have used **NavExpress** (described later in this manual) to create fast-loading miniatures you will have set a "Thumbnail size" which has a default value of 160. As long as the pixel resolution you select is less than or equal to the thumbnail size the reloading time will be fast. You may even decide to re-run **NavExpress** with a bigger value to facilitate this. Setting a large value will however also require more memory to be used so

generally you should only use this option if you *really* want a better quality catalogue printout.

**Max chars per item** controls the size of the text appearing underneath each item on the page. A value of 15 means that at least 15 capital letters will appear. If the full item name is too big to fit, it will be shortened:-

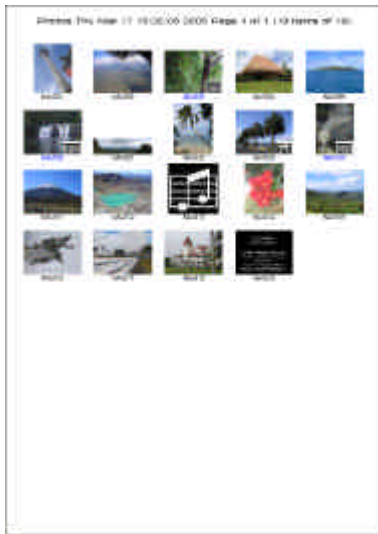


Max chars per item:6



Max chars per item:12

**Info line position** - each page may have an "Info line" which lists the current folder, the date and time, page numbers and item count. You may select here whether the info line appears at the top of the page, the bottom of the page or alternatively you may specify "no info line":-



Top



Bottom



No info

**Info line Folder/Date/Page numbers/Number of items.** Here you may individually specify what information appears in the info line; "Folder", "Date", "Page numbers" and "Number of items" may be chosen. A typical info line is shown below followed by a breakdown into constituent parts:-

Photos Thu Jan 20 15:39:02 2005 Page 1 of 1 (19 items of 19)

Folder	Date	Page numbers	Number of items
Photos	Thu Jan 20 15:39:02 2005	Page 1 of 1	(19 items of 19)

## **Saving as a PostScript® file**

Instead of printing, you can save your output as a PostScript® file. PostScript® is a graphics format which allows multiple pages so it can be used to store catalogue pages or multiple pan-print pages as well as single page images. PostScript® files are stored as text so you can edit them with a text editor if you want. Moreover you can also make simple adjustments to the output by editing the file so as to change the text font, page size, margins etc... The disadvantage with PostScript® files is their size – image compression is not used and the data actually has to be expanded to convert it from binary to text.

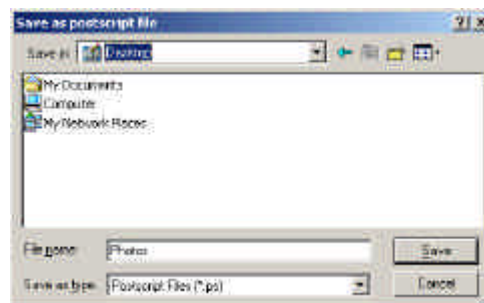
PostScript® was created in 1985 by Adobe Systems Incorporated. You may download a viewer for PostScript® files from the following URL:-

<http://www.cs.wisc.edu/~ghost/index.htm>

To save your output to a PostScript® file, hold down the "Ctrl" key and press "S". If you have not yet set margins or printed you will be requested to set up the page:-

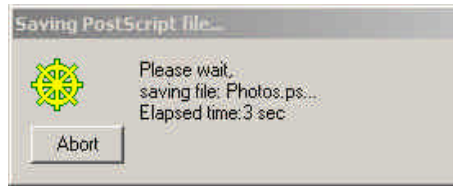


Otherwise you will get the "Save as PostScript® file" dialog:-



Decide where you want to save your file and what it should be called and then click on the "Save" button. The default name for the file will be the same as the image name if a picture is being saved (with "\_p" appended if in Pan mode) or it will be the folder name with "\_c" appended if a catalogue is being saved.

During the save you will see a progress dialog which allows you to abort the process if you want to (PostScript® files can take a long time to generate):-



PostScript® is a trademark of Adobe Systems Incorporated, 345 Park Avenue San Jose, CA 95110-2704 USA.

## **Editing a PostScript® file**

You can edit **Navigator** PostScript® files using a standard text editor such as WordPad. You have to look for specific lines in the file and edit them to reflect the values you want. These lines are all in the first part of the file. You can change the following values for all files:-

### **Page size**

You change the page size by editing the "DocumentMedia" line. The units must be in points (72 points = 1 inch). For example, the following entry would set the page size to be 5 inches wide (5 x 72 = 360) by 10 inches high (10 x 72 = 720):-

```
%%DocumentMedia: Plain 360 720 0 white ()
```

### **SetMargins**

The '/SetMargins' line sets the margins in the sequence left/bottom/right/top. Default units are in points (72 points = 1 inch). You may also use 'inch', 'cm' or 'mm'. Invalid values are reset to zero. The following examples are all equivalent and set margins to left 1", bottom 0.75", right 0.5", top 0.25":-

```
/SetMargins {[72 54 36 18]} def  
/SetMargins {[1 0.75 0.5 0.25] inch} def  
/SetMargins {[2.540 1.905 1.270 0.635] cm} def  
/SetMargins {[25.40 19.05 12.70 6.35] mm} def
```

### **Duplex**

The '/Duplex' line sets double-sided printing to switch the margins on alternate pages for binding. Duplex takes the following values:-

```
/Duplex (v) def - Switch left and right on alternate pages  
/Duplex (h) def - Switch top and bottom on alternate pages  
/Duplex (n) def - Single sided printing
```

In addition you can change these values for catalogue files:-

### **Font**

The '/Font' line selects the font to use for text. The following example selects 'Courier':-

```
/Font (Courier) def
```

### **Info line position**

The '/InfoLinePos' line positions the info line on the page:-

```
/InfoLinePos (t) def - Top of the page.
```

```
/InfoLinePos (b) def - Bottom of the page.
```

```
/InfoLinePos (n) def - No info line.
```

### **Item text size**

The '/ItemChars' line selects the fontsize for the item captions. The following example selects a fontsize so that at least 10 characters will be seen for each item's name:-

```
/ItemChars 10 def
```

The first lines in a standard **Navigator** PostScript® file is shown below, with the relevant lines highlighted:-

```
%!PS-Adobe-3.0
%%Title: Photos.ps
%%Creator: Navigator v1.10 Apr 22 2005
%%For: romaya
%%CreationDate: Fri Apr 22 15:45:00 2005
%%DocumentMedia: Plain 612 792 0 white ()
%%Pages: 1
%%EndComments
%%BeginDefaults
%%PageMedia: Plain
%%PageOrientation: Portrait
%%EndDefaults
%%BeginPrologue
/SetMargins {[0 0 0 0]} def
/Duplex (n) def
/Font (Times) def
/InfoLinePos (b) def
/ItemChars 15 def
```

## **Advanced operations**

There are also a number of advanced operations which should only be carried out by an experienced operator. These are:-

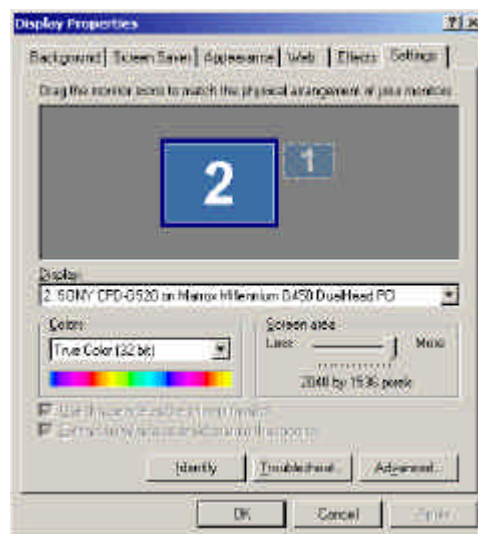
- 1/ **Variable resolution** mode
- 2/ **Verbose** mode
- 3/ **GraphBuilder** mode

To access all these advanced operations you must be in **Directory** mode and you must hold down the "Ctrl" and shift keys in addition to pressing one of the function keys F2, F3 or F4. Repeating the keypress reverses the operation.

## **Variable resolution mode**

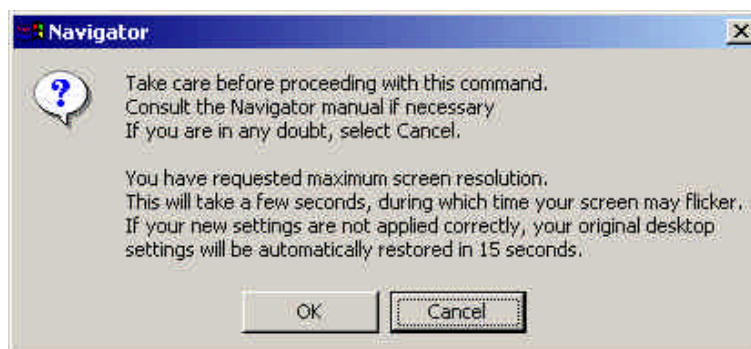
When you select this mode, **Navigator** will automatically change your screen resolution to the maximum possible when displaying pictures and change it to a minimum value when displaying movies. Pictures will then be displayed at the maximum possible resolution while a lower resolution is used for movies to ensure high performance.

However, there is a possible problem when using this mode; if your operating system has not been set up with the appropriate driver for your monitor then it is possible that the maximum resolution cannot be displayed on your monitor and the screen will go black. You can check on this using the "Display" control panel:-



Set the "Screen area" to the maximum value as shown above and click on "Apply". If the new resolution is applied correctly then you can use **Variable resolution** mode. If not, you will have to update the driver for your monitor.

Because of this problem, safeguards are built into **Variable resolution** mode. You can set **Variable resolution** mode from **Directory** mode. Hold down the "Ctrl" and shift keys and then press the "F2" key. You should see the following dialog:-



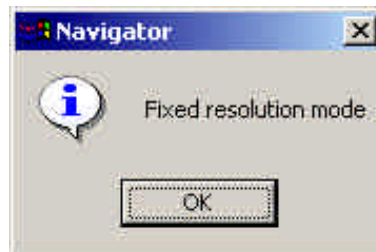
Click on the "OK" button to proceed.

The screen will then flicker as the new resolution is applied and, if all has gone successfully, you should then see the following dialog:-



Click on "Yes" within 15 seconds to accept the change, otherwise, click on "No" or do nothing to go back to the previous resolution.

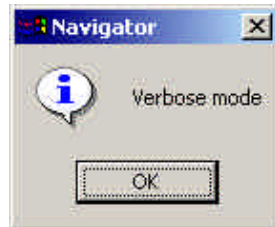
If you want to come out of **Variable resolution** mode, go into **Directory** mode, hold down the "Ctrl" and shift keys and press "F2" again; the display will be reconfigured and you should see the following dialog (Click on the OK button to proceed):-



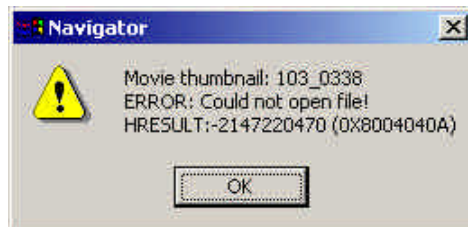


## **Verbose mode**

This mode is used to get extra messages if there is something wrong with the program. It is unlikely to be of use in normal operation. To enter **Verbose** mode go into **Directory** mode, hold down the "Ctrl" and shift keys and press the "F3" key. You should see the following dialog (Click on the OK button to proceed):-

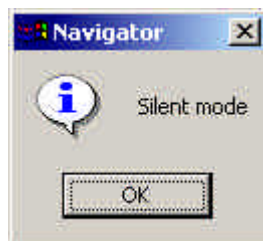


While you are in **Verbose** mode you may see error messages which are usually hidden such as in the example below:-



These error messages give information about where the error happened and what the details of the error are.

To exit **Verbose** mode go into **Directory** mode, hold down the "Ctrl" and shift keys and press the "F3" key again. You should see the following dialog (Click on the OK button to proceed):-

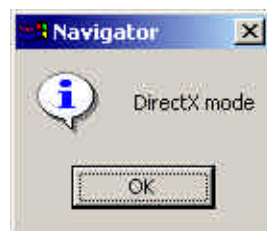


## **GraphBuilder mode**

You may find that movies will not play properly on your PC. If this happens you may be able to play the movies using a different method. Usually **Navigator** tries to use standard DirectX functions to play movies, but another method is available. This uses another operating system component called GraphBuilder. To enter **GraphBuilder** mode, go into **Directory** mode, hold down the "Ctrl" and shift keys and press the F4 key. You should see the following dialog (Click on OK to proceed):-



To exit **GraphBuilder** mode go into **Directory** mode, hold down the "Ctrl" and shift keys and press the "F4" key again. You should see the following dialog (Click on the OK button to proceed):-



## **Web distribution**

The latest **Navigator** package is to be found at the following URLs:-

<http://www.homepages.ucl.ac.uk/~ucgajpr/Navigator/>

Or

<http://www.geocities.com/jprwww/Navigator.html>

It contains a WinZip archive named Navigator.zip which in turn contains the following files:-

Navigator.exe	<b>Navigator</b> program file
NavManual.pdf	This user manual in Adobe .pdf format
Setup.exe	Installer program for Windows 95/98/2000/XP
NavRename.exe	Helper utility
NavRetime.exe	Helper utility
NavExpress.exe	Helper utility
Autorun.inf	Used for making an Auto-play CD
Navigator.ico	Image for Auto-play CD
README.txt	Short explanatory notes

When you extract these files they will be placed in a new folder named "Navigator". You can then run the **Setup** program described later in this manual to install the package on your Windows 95/98/2000 system.

Adobe Reader is available from the Adobe website ([www.adobe.com](http://www.adobe.com)). WinZip is available from the WinZip website ([www.winzip.com](http://www.winzip.com)).

**Navigator** can produce output files in PostScript® format. A free viewer is available from the following URL:-

<http://www.cs.wisc.edu/~ghost/index.htm>

## **Creating an Auto-play CD**

A convenient way to use **Navigator** is to create an auto-play CD with pictures and movies and set it up to run **Navigator** when it is inserted into a PC. To do this, place the following files (available from the Web distribution) in the top directory of your CD:-

Navigator.exe  
Autorun.inf  
Navigator.ico

If you have installed the **Navigator** package using the **Setup** utility you will be able to find these files in your system's "Program Files\Navigator" folder.

The Autorun.inf file signifies that the CD should be Auto-play and it should contain the following three lines of plain text:-

```
[autorun]
open=Navigator.exe
icon=Navigator.ico
```

The Navigator.ico file contains an image of how the CD should appear:-



**Navigator** ignores any folder named "NavExtras". You can create a "NavExtras" folder on the CD and fill it with any extra material you might want to include. Although the folder will be visible on the CD it will not appear on the **Navigator** display.

It is a good idea to run **NavExpress** on your image file folders before you make your CD. This will vastly improve the performance of Navigator when loading files from it.

## **Troubleshooting**

Here are some probable solutions to frequently encountered problems:-

- 1/ *When running a slideshow the screen goes black after 15/20/30 minutes.*

This is probably because your screensaver or powersaver has cut in. During a slideshow you may not move the mouse or press a key on the keyboard for a long time and so the screensaver or powersaver will switch off the monitor.

**Move the mouse, hit a key or reset the screensaver and powersaver settings using the Displays control panel.**

- 2/ *Navigator is running slowly when displaying pictures.*

Displaying very large pictures can take some time, especially if your PC is not particularly powerful.

**You may get an improvement if you reduce the resolution of your screen using the Displays control panel.**

- 3/ *Pictures and movies appear in strange colours.*

**Navigator** does not work well in 256 colour mode.

**Change your screen to 16, 24 or 32 bit mode using the Displays control panel.**

- 4/ *Movies do not play and/or movies do not appear in miniature in **Directory view** mode.*

This fault may be due to problems with DirectX or your graphics card driver.

**Going into GraphBuilder mode may cure this problem.**

- 5/ *Movies play sluggishly or jerkily.*

Playing movies is especially demanding on your PC, particularly at high screen resolutions. You may need to fine-tune your display to get the best results.

**First try reducing your screen resolution using the Displays control panel. You can also try each of the 16, 24 and 32 bit colour modes in turn to see which gives the best results. You may also find that you get better results in GraphBuilder mode. Finally you can try Variable resolution mode (use with caution).**

- 6/ *When I try to play a movie I get a message saying that QuickTime is unavailable.*

In order to play QuickTime ".mov" movie files you must install QuickTime on your PC.

**Download QuickTime from the Apple website (<http://www.apple.com>) and install it on your PC.**

- 7/ *When I try to play a movie I only get the sound.*

A movie file can contain separate audio and video data. In some cases only the audio data can be recognized and the video cannot be shown.

**You may be able to play the video if you install the appropriate codec for the file. Consult the section in this manual on "Movies – upgrading your system".**

- 8/ *When I try to play a movie I get a message saying "Unsupported codec".*

The video format of the movie file has not been recognized.

**You may be able to play the video if you install the appropriate codec for the file. Consult the section in this manual on "Movies – upgrading your system".**

- 9/ *Movies won't play in **Navigator** even though they play in Windows Media Player. I get error messages mentioning errors 0X80004005 and/or 0X8004040A.*

Some third party codecs can generate these errors with certain graphic card drivers.

**Try using GraphBuilder mode, it sometimes works where standard DirectX methods don't. Otherwise, if you are an experienced Windows system administrator, obtain an updated codec for the movie file, remove the existing codec from your operating system, and reinstall.**

- 10/ *I find that **Navigator** takes a long time to read in and display thumbnail images.*

Thumbnail images can take a long time to generate, especially on a slow PC or when they are on a CD. This can become a problem if there are many thumbnails to display.

**Use **NavExpress** to speed up the process. If you intend to put your images on a CD then you should definitely run **NavExpress** on your image folders before you copy them onto CD.**

11/ *I selected 6 seconds for my slideshow but the pictures are on screen for a longer time than this..*

Some pictures can take a long time to load, especially on an older, slower PC. If the picture is very big, it can take several seconds, perhaps even longer than the slideshow time you have requested. Once loaded, some pictures also take a long time to draw onto the screen especially if they are particularly long and thin either horizontally or vertically. The slideshow timing relates to the time the picture is displayed in its entirety and excludes the draw time.

**Unfortunately, the only remedy I can suggest here is to use a faster PC. Slideshow timing was improved in v1.07 so make sure you have the most up-to-date version of [Navigator](#). Reducing the slideshow time should not help this problem.**

12/ *I can play Quicktime movies but they do not appear as thumbnails and I cannot print them.*

The full version of Quicktime has to be installed. If you just install the "Minimum" set you do not get all the features.

**Uninstall Quicktime and then reinstall the full version.**

## Summary of keyboard and mouse button commands

### Directory mode

S	Start <b>Slideshow</b> mode.
Cursor left/right/up/down	Move the currently selected item.
Shift + Cursor left/right	Go to previous/next page.
Shift + Cursor up/down	Increase/decrease slideshow duration.
Ctrl + Cursor up	Ascend into upper directory.
R	Rotate current picture 90° clockwise.
Return	Enter a directory or display current item.
Esc	Exit <b>Navigator</b> .
Shift + Ctrl + F2	Enter/exit <b>Variable display</b> mode
Shift + Ctrl + F3	Enter/exit <b>Verbose</b> mode
Shift + Ctrl + F4	Enter/exit <b>GraphBuilder</b> mode
Mouse button	Enter a directory or display current item.

### Interactive mode

S	Start <b>Slideshow</b> mode.
Z	Enter <b>Zoom</b> mode.
P	Enter <b>Pan</b> mode.
Spacebar	Pause/resume a movie.
Cursor left/right	Display previous/next item.
R	Rotate picture 90° clockwise.
Return	Go into <b>Directory</b> mode.
Esc	Go into <b>Directory</b> mode.
Mouse button	Go into <b>Directory</b> mode.

### Slideshow mode

S	Resume a paused slideshow.
Z	Enter <b>Zoom</b> mode.
P	Enter <b>Pan</b> mode.
Spacebar	Pause/resume slideshow.
Cursor left/right	Show previous/next item in <b>Interactive</b> mode.
R	Rotate picture 90° clockwise in <b>Interactive</b> mode.
Return	Go into <b>Directory</b> mode.
Esc	Go into <b>Directory</b> mode.
Mouse button	Go into <b>Directory</b> mode.



## **Zoom mode**

Left mouse click / "+" key	Enlarge the image.
Right mouse click / "-" key	Reduce the image.
Cursor left/right/up/down	Move the current view (+ Shift to move fast).
Left mouse hold down & drag	Drag the current view.
Z	Go into <b>Interactive</b> mode.
P	Enter <b>Pan</b> mode.
R	Rotate picture 90° clockwise.
Return	Go into <b>Interactive</b> mode.
Esc	Go into <b>Directory</b> mode.

## **Pan mode**

Cursor left/right/up/down	Move the current view (+ Shift to move fast).
P	Go into <b>Interactive</b> mode.
Z	Enter <b>Zoom</b> mode.
R	Rotate picture 90° clockwise.
Return	Go into <b>Interactive</b> mode.
Esc	Go into <b>Directory</b> mode.
Mouse button	Go into <b>Interactive</b> mode.

## **Printing**

P + Ctrl	Print
P + Shift	Page setup
P + Ctrl + Shift	Print Settings
S + Ctrl	Save output as a postscript file

## **Helper utilities**

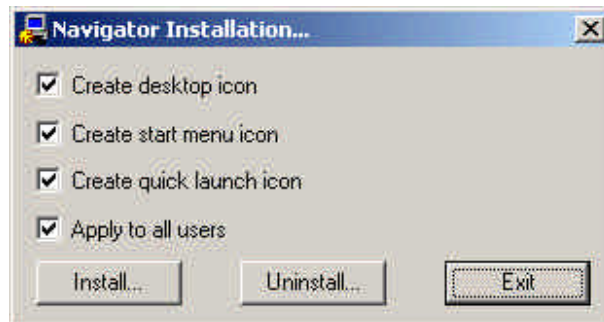
Three helper utilities are distributed with the **Navigator** package; **Setup**, **NavRename** and **NavExpress**. **Setup** is an installer for the package and the other two utilities provide some useful extra functions for producing slideshow sequences particularly when using material from digital cameras. **NavRename** allows you to rename image and movie files into a numbered sequence based on the time the pictures were taken. **NavExpress** can drastically speed up the loading of image thumbnails.

### **Setup**

**Setup** installs or uninstalls the **Navigator** package on your Windows95/98/2000/XP system. The **Setup** icon looks like this: -

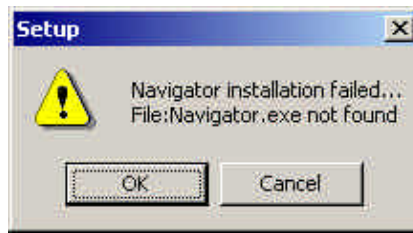


When you run **Setup** a check is made that you are using Windows 95/98/2000/XP. If you are not, the program exits with an error message. If this happens, you can still use the **Navigator** package but you should copy the program files to a suitable and convenient location on your PC. Otherwise **Setup** opens the following dialog box:-

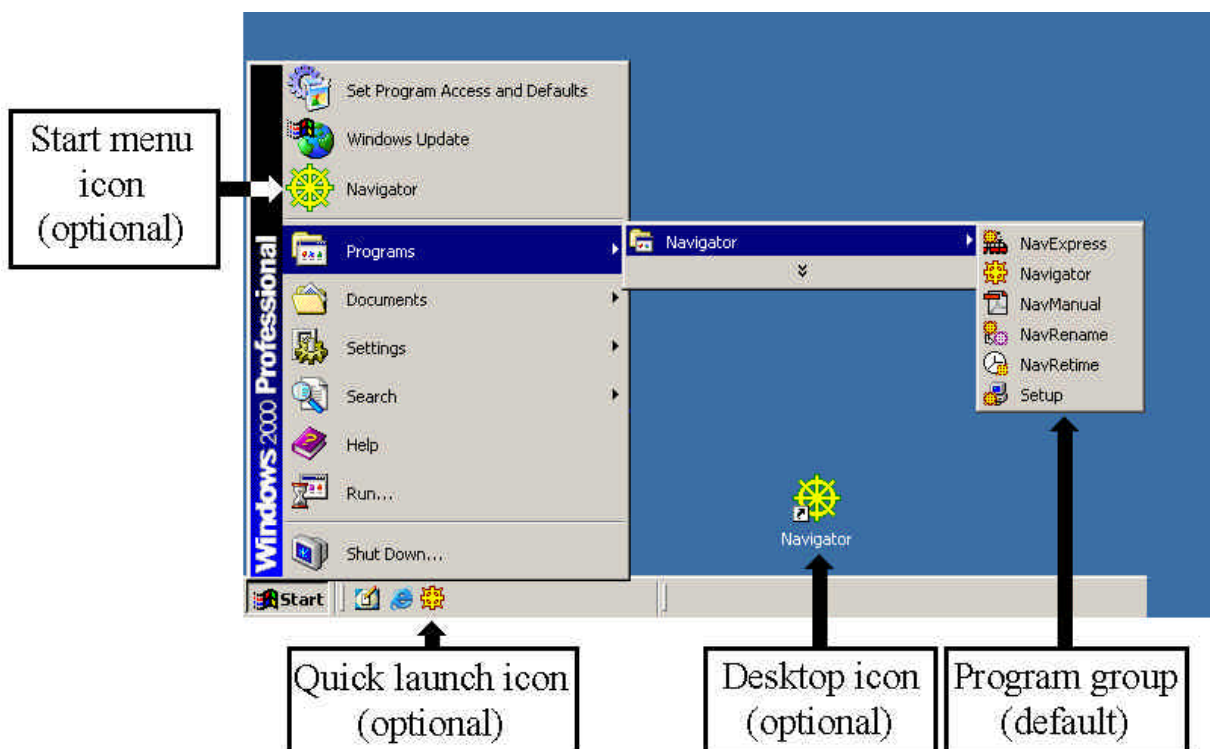


There are some selectable tick-box settings (the "Apply to all users" item does not appear on Windows 95/98, and "Create quick launch icon" does not appear on Windows 95). There are also buttons to install or uninstall the **Navigator** package and a button to exit the installation.

If you click on "Install", **Setup** first checks to see that the **Navigator** package files are in the same directory. If a file is missing you will get an error message:-



Otherwise, **Setup** creates a new folder named "Navigator" in your system's "Program Files" directory and copies the **Navigator** package files to it. It then creates the following extra items on your desktop, quick launch and start menu:-



The "Program group" is always created, but the "Start menu", "Quick launch" and "Desktop" icons are created only if they had been selected with a tick in the dialog box. If you are running Windows 2000/XP and the "Apply to all users" setting was ticked, the "Start menu", "Quick launch" and "Desktop" icons are created for all users on the system, otherwise they will be created just for you. Once you have installed the package in this way you may delete the material which you downloaded from the website, if you wish. You can always find the files that were there in your system's "Program Files\Navigator" folder even though they do not all appear in the program group of your system's "Start" menu.

You can also uninstall the **Navigator** package using the **Setup** utility. If you click on the "Uninstall" button, the package will be removed from your system.

## **NavRename**

**Navigator** displays pictures and movies in alphabetical order. Usually that is fine, but when you take pictures with a digital camera, pictures, audio and movies are sometimes named differently. The result of this is that all the movies appear together, all the audio appears together and all the pictures appear together, rather than the pictures, audio and movies being displayed in chronological order. A similar problem occurs if you have pictures from two cameras when again the sequence will be wrong.

What is required is to rename the items in a sequence based on the time they were taken. This is possible because files downloaded from a digital camera usually have the time the picture was taken preserved as the file modification time.

The **NavRename** program will rename picture, audio and movie files in a numbered sequence based on the file modification time.

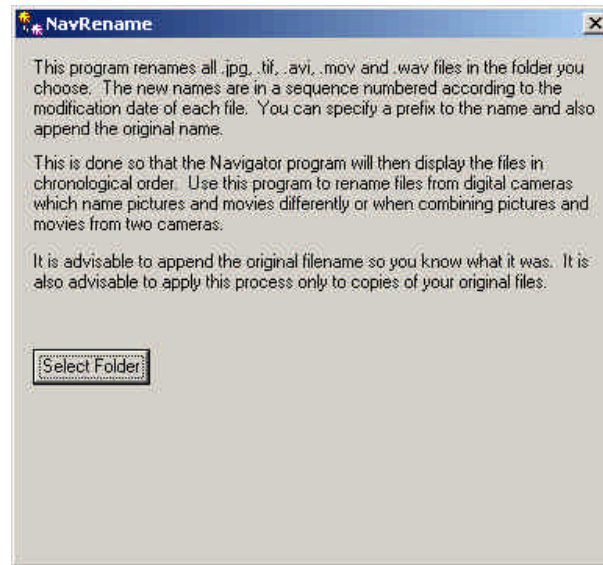
You should be careful about using this program because the original filenames will be changed. The default operation is to append the original filename onto the new name but if you do not choose this option the original name will be lost. It is recommended that **NavRename** should only be run on copies of your files so that you always have the original set of names for future reference.

You may find that the file modification times for some of your pictures are incorrect. This can easily happen if you are abroad on holiday taking pictures and you forget to change the time set on your digital camera when you move into a different time zone. Or, you may want to combine pictures taken from two cameras where the times set on each camera do not coincide exactly resulting in an out-of-sequence numbering when you use **NavRename**. If either of these situations arise you can adjust the file modification times using the **NavRetime** utility described later in this manual.

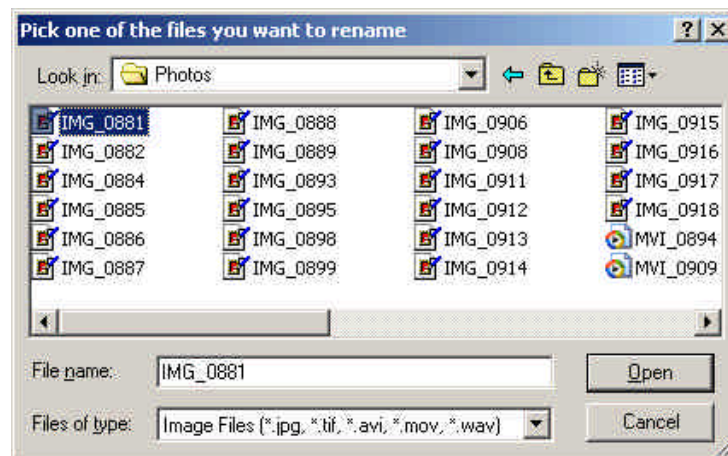
The **NavRename** program icon looks like this:-



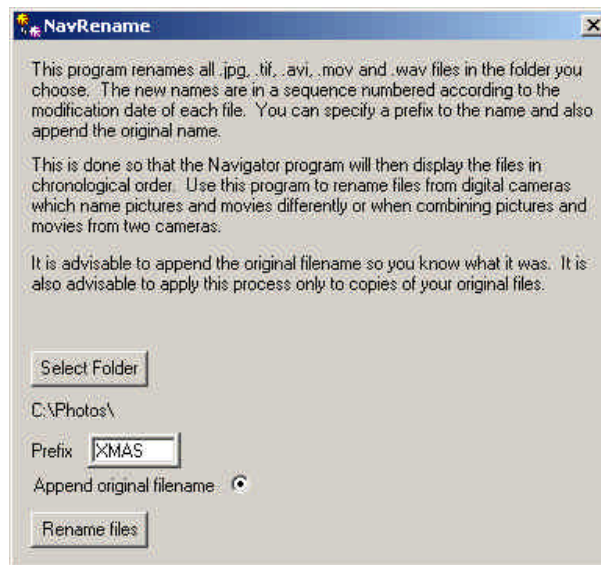
When you first run the program you will be prompted to select a folder where **NavRename** will operate. You may quit the program at any time by clicking the small cross in the upper right corner of the dialog box:-



When you click on the "Select Folder" button you will see a file selection box. You should then select one of the files you want to rename. Be aware that **ALL** .jpg and .tif picture files, .wav audio files and .avi and .mov movie files in this folder will be renamed. Select one of the files and click on the "Open" button:-



The **NavRename** dialog will now look like this:-



There are now some new items visible:-

The folder you have selected appears just under the "Select Folder" button. In this case it is called "C:\Photos\".

There is now a "Prefix" box. You may enter up to 4 characters (letters and numbers only) here which will make up the first part of the new filenames. In this case the prefix is "XMAS" and so the new filenames will be XMAS001, XMAS002, XMAS003 etc... If you leave the prefix box blank the new filenames will simply be 001, 002, 003 etc...

There is also a checkbox called "Append original filename". This is checked by default as shown above but you can clear it or reset it by clicking it with the mouse. When this box is checked, the original filename will be appended onto the new name with the insertion of an underscore character separator e.g.

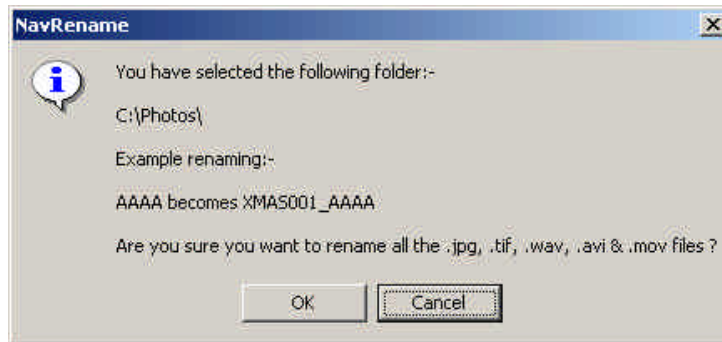
IMG\_0881 will be renamed XMAS001\_IMG\_0881

This gives a way of keeping the original filename but maintaining the correct sequence. You may however not be bothered about keeping the original name in which case you should clear the "Append original filename" checkbox. Then you will get:-

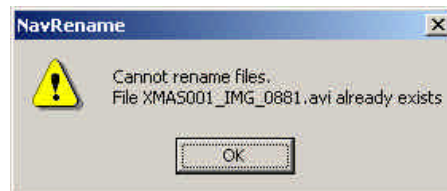
IMG\_0881 will be renamed XMAS001

When you have decided on these settings you should click on the "Rename files" button.

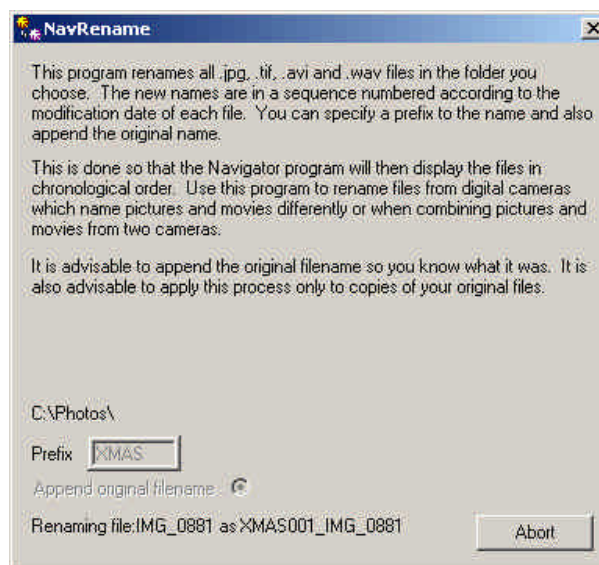
You will then see a dialog telling you which folder you have selected and giving you an example of how the files will be renamed. At this point you can either cancel the operation or click on OK to proceed:-



If you click on "OK" the program checks for file renaming conflicts. In particular it checks whether a file already exists with one of the new names. If it does, you will see a warning message and when you click OK the renaming operation will be aborted:-

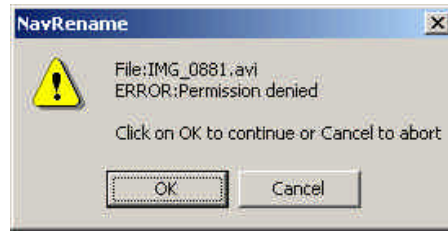


Otherwise, if there are no renaming conflicts, the renaming operation will start:-



The "Select folder" button disappears and the "Prefix" box and "Append original filename" items are disabled. The current renaming operation is displayed at the bottom of the dialog. You may abort the operation at any time by pressing the "Abort" button. When the renaming operation is finished you will go back to the beginning again when you can choose to select a new folder or quit the program.

If an error occurs you will see an error message similar to the one shown below. You may either ignore the error and continue by clicking the "OK" button, or click on "Cancel" to quit.





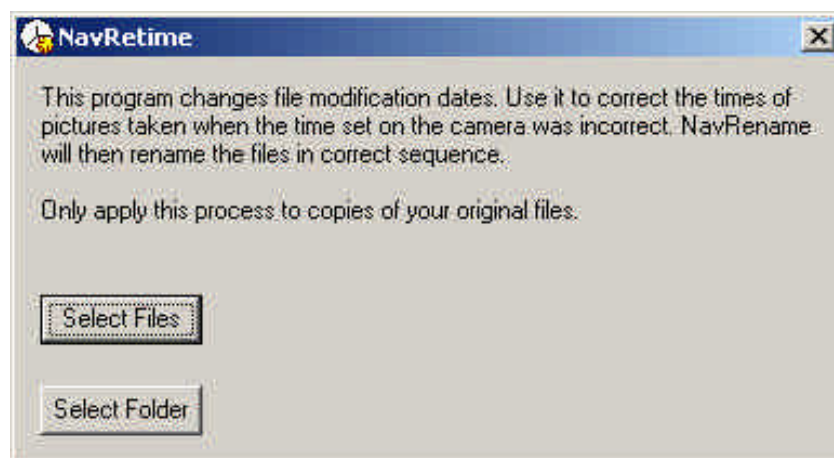
## NavRetime

The **NavRename** utility described earlier renames files according to their modification dates and so puts them into chronological order. However, sometimes the modification dates can be incorrect. This can easily happen if you are abroad on holiday taking pictures and you forget to change the time set on your digital camera when you move into a different time zone. Or, you may want to combine pictures taken from two cameras where the times set on each camera do not coincide exactly resulting in an out-of-sequence numbering when you use **NavRename**. If either of these situations arise you can adjust the file modification times using the **NavRetime** utility. However, exercise caution when using this utility as the effects may be difficult to reverse. It is advisable to keep a safe copy of your original files.

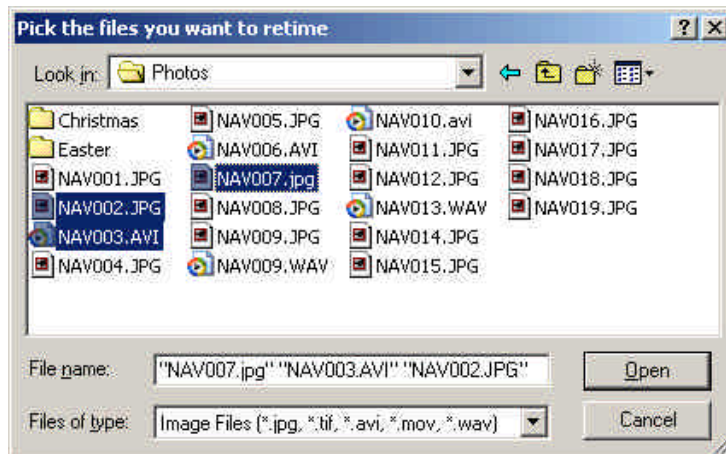
The **NavRetime** program icon looks like this:-



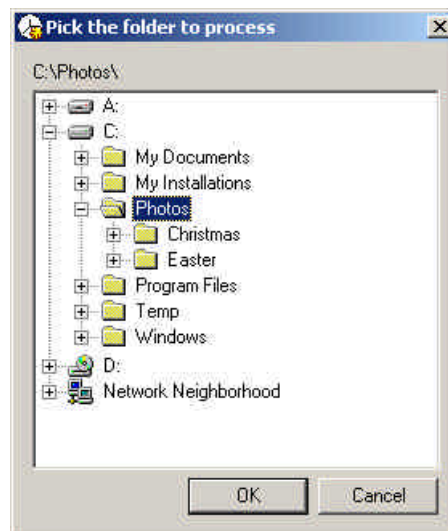
When you first run the program you will be prompted to select some files which have an incorrect modification time. You may either select individual files or an entire folder:-



If you click on "Select Files" you can then select individual multiple files by clicking on them with the mouse while holding down the control or shift keys:-



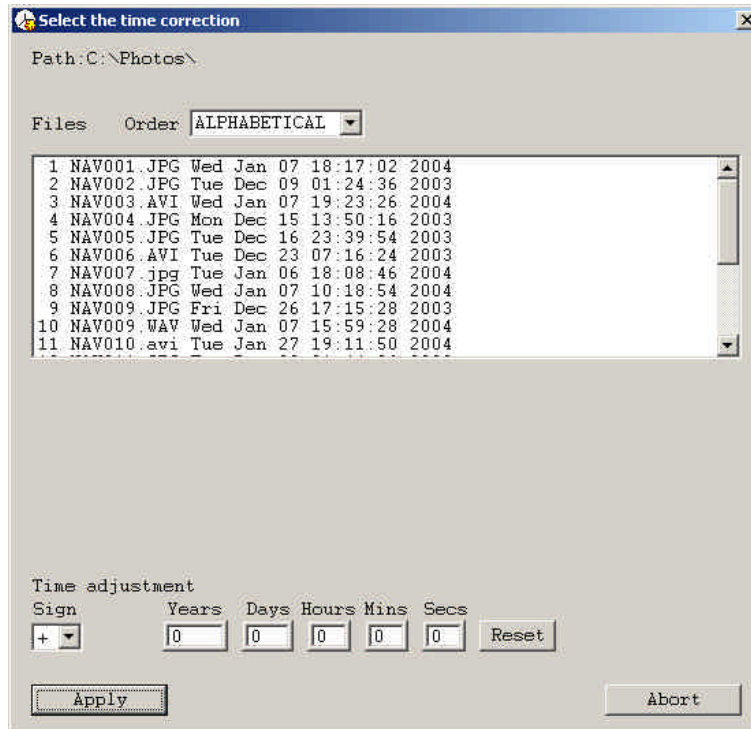
Alternatively, click on "Select Folder" to select an entire folder:-



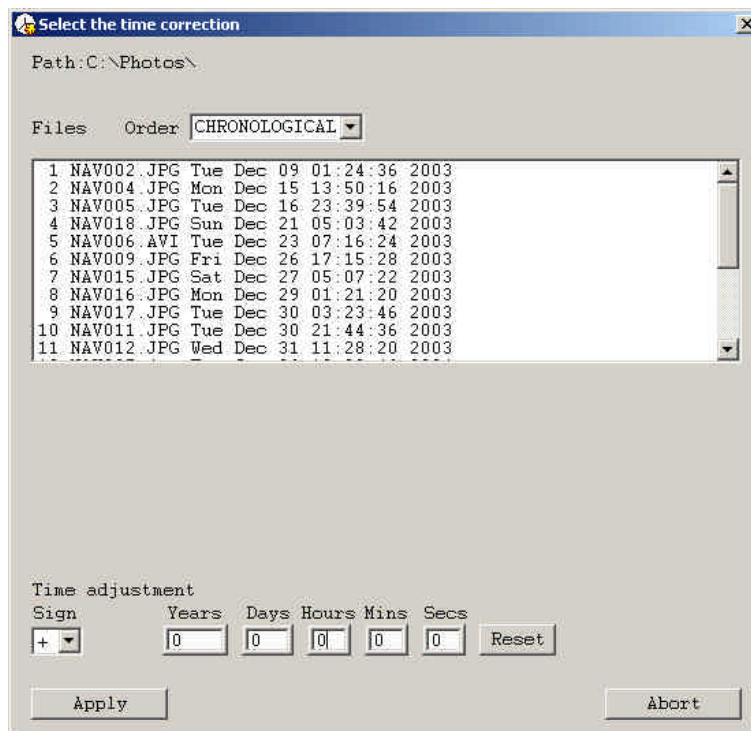
If any of the files you have selected are "Read Only" you will see an error message because such files cannot have their modification time changed. If this happens you must either exclude those files from your selection or allow write access to the file:-



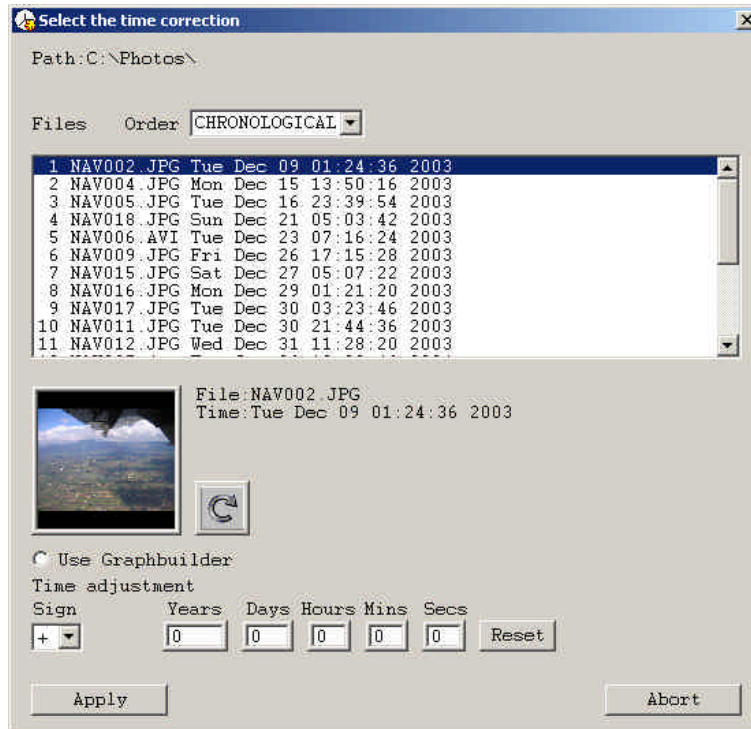
Once you have selected the files or a folder and all the files have write access you will see the time adjustment dialog:-



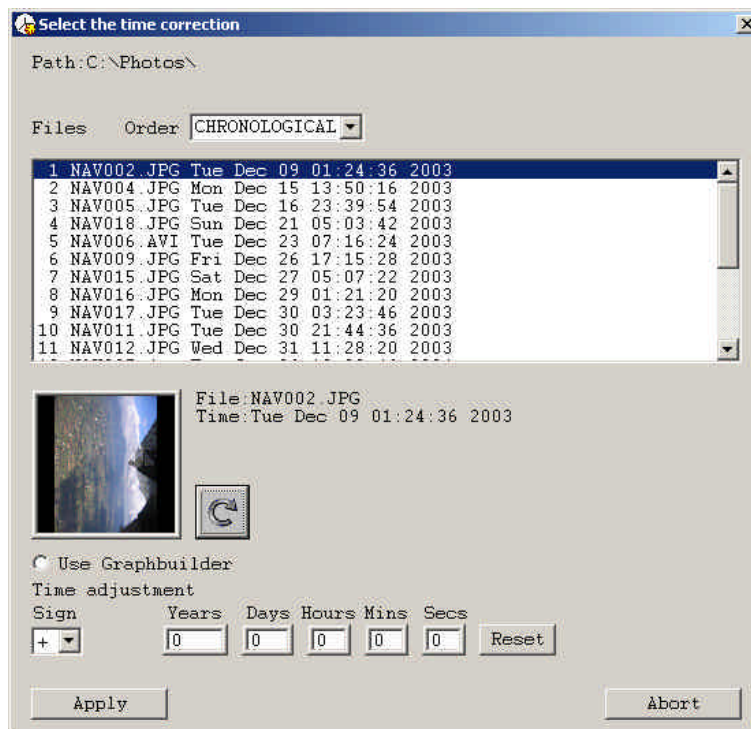
The files you have selected are shown with the modification times. The folder is displayed as "Path" in the upper left corner. List the files in alphabetical order (as shown above) or in chronological order (as shown below) by selecting the appropriate "Order" setting:-



You can click on a file in the list to select it, in which case a miniature image of the file will be displayed together with the file details: -



If you cannot see miniatures for some of your movies you may find that clicking the "Use Graphbuilder" button solves the problem. Audio files do not exhibit miniatures. Instead you get a message stating "No Image Available". Images (but not movies) can be rotated by clicking on the "Rotate" button:-



If you click on the miniature picture you get a new window showing the image in detail:-



You can rotate the image by repeatedly clicking the "R" key:-



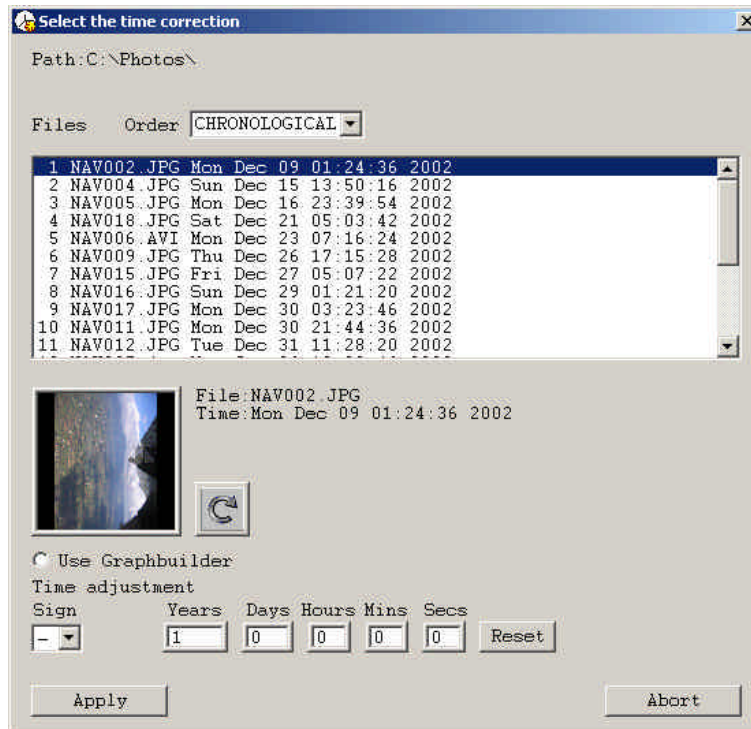
To zoom in on a point, click on it repeatedly with the left mouse button (right mouse button to zoom out). The detail window supports all the usual operations such as resize, scroll, maximize, minimize, restore and close:-



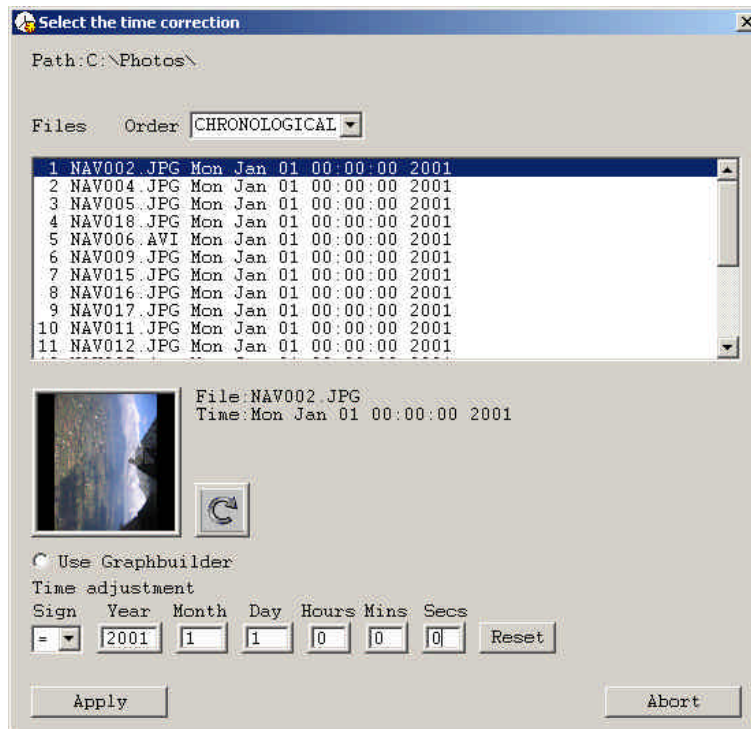


There are three possible time adjustment operations, selected by the "Sign" item:-

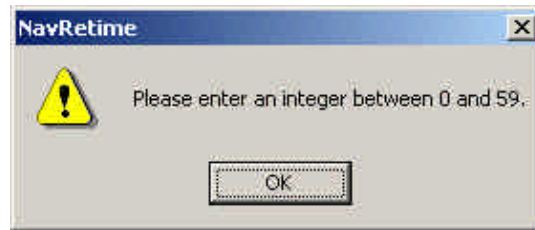
Sign '+' and Sign '-' operations respectively increment or decrement the file times. Values can be put into the "Years", "Days", "Hours", "Mins" and "Secs" items:-



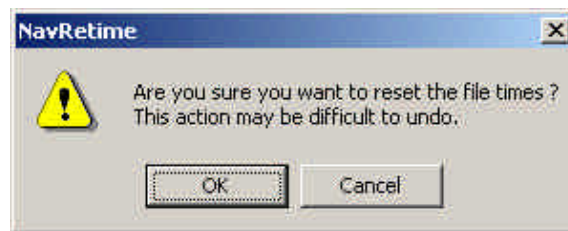
The Sign '=' operation has values for "Year", "Month", "Day", "Hours", "Mins" and "Secs":-



If you click on the "Reset" button the time adjustment values are reset to zero with the Sign "=" values reset to Jan 1 2001 00:00:00. If you put in an invalid value you are prompted to correct it:-



Finally, when you are satisfied with the time adjustment, click on the "Apply" button. You are given a final chance to cancel the operation:-



If you click on "OK" at this point the new file times will be written to the files. Otherwise click on "Cancel" to abort the operation. If any error occurs while resetting the filetimes the operation will be aborted, the original filetimes will be restored and you will see an error message:-



You should be aware that on some filesystems you can only set a file modification time to a resolution of 2 seconds. This means that sometimes an unexpected time will be saved. For example, setting a time of 12:00:01 will be recorded as 12:00:02. Unfortunately in these cases this is unavoidable.

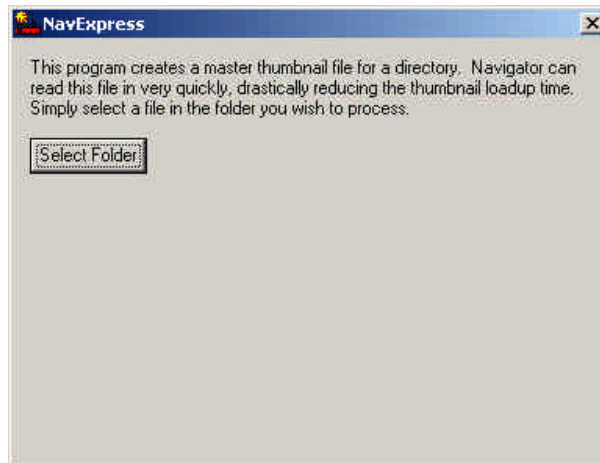
## NavExpress

When **Navigator** goes into a new directory it reads in each file in the directory to obtain a miniature image to display. First the .jpg and .tif image files are read in and then the .avi and .mov movies. This can take a long time, especially if you are reading from a CD, so an alternative is provided. The **NavExpress** program can create a special file in the directory named ".nvx", which **Navigator** can display much more quickly.

The **NavExpress** program icon looks like this:-

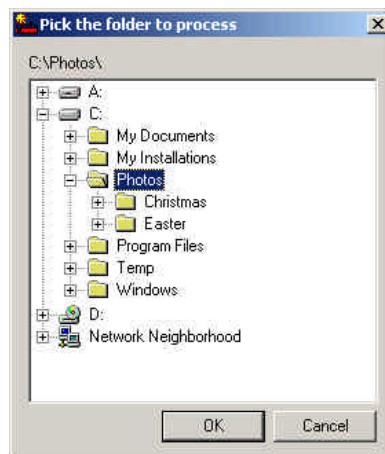


When you first run the program you will see the following dialog:-



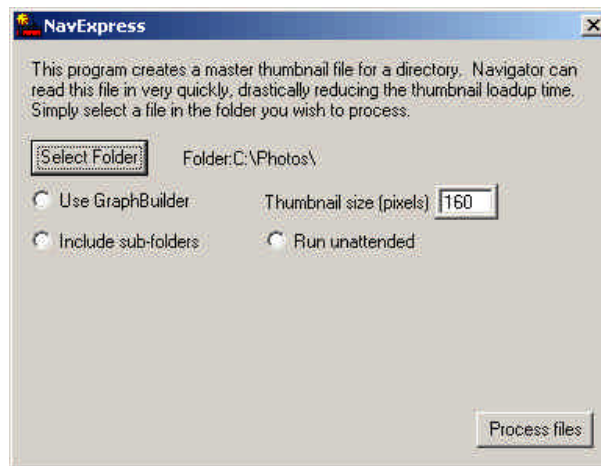
You may exit the program by clicking the small cross in the top right corner of the dialog box.

Click on the "Select Folder" button and select the folder you want to process:-





Then click on the "Open" button when you have selected a folder.:-



The name of the selected folder is shown (in this case it is C:\Photos\) and there are a number of other settings which you can select:-

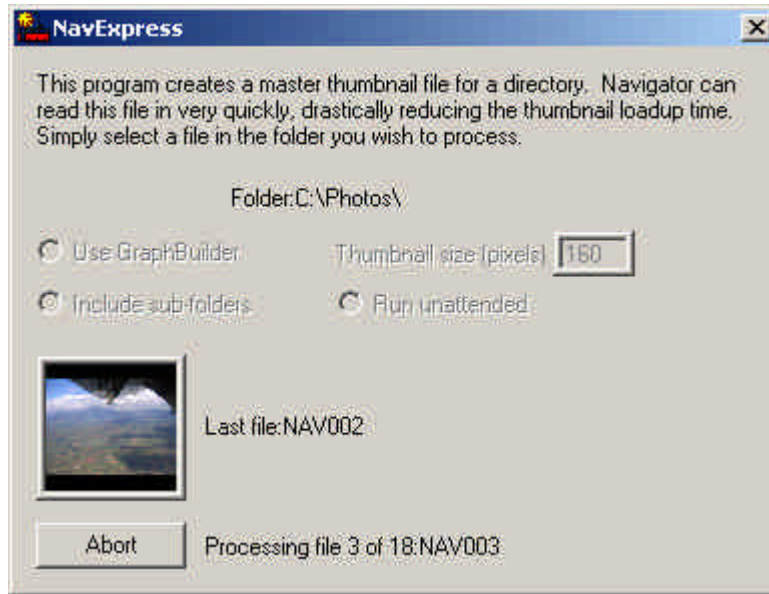
**Use GraphBuilder** Select this item if you want to use GraphBuilder rather than DirectX to process movie files. You may find it gives better results in some cases.

**Thumbnail size** This sets the thumbnail image size which will be created. You can set any value from 1 to 9999 here. Small values create a small ".nvx" file, large values create much larger files. A value of 160 here is a good compromise.

**Include sub-folders** If you select this item, **NavExpress** will recursively process all sub-folders in your selected folder.

**Run unattended** Usually, **NavExpress** will inform you about errors which occur or it may warn you about certain conditions which mean it cannot create the ".nvx" file, for example if the folder is write protected and so no file can be written. If you select this item, such communications will be suppressed and **NavExpress** will skip any error conditions and continue with processing the rest of the job. You may want to select this item if you are processing a large number of files or sub-folders and you don't mind if some errors are skipped.

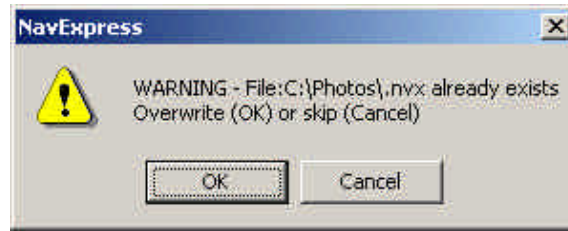
When you have selected the settings you want, click on the "Process Files" button to start processing.



**NavExpress** now processes each image file in turn and displays the last processed file in a small box. In the example above file NAV003 is being processed. It is file number 3 in a group of 18 files. The previous file, NAV002 (file 2 of 18), is displayed in the box. All the settings are disabled because you cannot change them at this stage. However, you can abort the operation by clicking the "Abort" button. After processing the files, **NavExpress** returns to the "Select folder" state: -



You may encounter error messages with **NavExpress**. For example, if the ".nvx" file exists already, you will see the following message:-



These messages occur if an error happens or if a choice needs to be made, as in the above example. However, they can be suppressed by selecting the "Run unattended" setting.

If you keep all your images in one folder, it is a good idea to run **NavExpress** on that folder periodically to keep all the ".nvx" files up to date. Select the "Include sub-folders" and "Run unattended" options when you do this. You should also make sure that you run **NavExpress** on any folders which you want to copy onto a CD because **Navigator** can take a particularly long time to load thumbnails from a CD.