

LView Pro for Windows 95

LView Pro Copyright © 1993-1996 by Leonardo Haddad Loureiro, All Rights Reserved.

Marketed by MMedia Research Corp.

Please, refer to the help topic [Licensing, Registration and Distribution](#) for necessary information.

[**Package Contents**](#)
[**Registering LView Pro**](#)
[**Installation and Troubleshooting**](#)
[**Frequently Asked Questions**](#)

Top Menu Items:

[**File Menu**](#)
[**Edit Menu**](#)
[**Retouch Menu**](#)
[**Help Menu**](#)

Tool Bar Operation:

[**Tool Bar Position**](#)
[**Tool Bar Command List**](#)

Additional Topics:

[**Selection Area Operations**](#)
[**Image File Formats**](#)
[**Keyboard Accelerator Keys**](#)
[**Embedded Calculator Operation**](#)
[**Graphics Mode**](#)
[**Multiple File Selection**](#)
[**TWAIN support**](#)

[**Disclaimer**](#)
[**Acknowledgments**](#)

File Menu

Select Menu Item:

New

Open

Reopen

Multiple Open

Save

Save as

Properties

Acquire

Select source

Print

Printer setup

Exit

Edit Menu

Select Menu Item:

Undo

Cut

Copy

Paste

Delete

Capture

Resize

Redimension

Crop

Undefine

Apply

Add text

Flip horizontal

Flip vertical

Rotate left

Rotate right

Full Screen

Retouch Menu

Select Menu Item:

Gamma Correction

Color Balance

Contrast Enhance

HSV Adjust

YCbCr Adjust

Interactive RGB

Exp Enhance

Log Enhance

SineH Enhance

Grayscale

Negative

Palette Entry

Color Depth

Image Filters

Background Color

Macro Retouch

File/Properties/GIF

Use this dialog to set preferences on creating GIF files. Options are:

Save Interlaced: If checked, all GIF files will be saved in Interlaced format

Save Transparent Color Information to GIF89a Files: If checked, will use the palette entry chosen as background color, on the dialog Retouch/Background Color, as the transparent color record on GIF89a files.

Help Menu

Select Menu Item:

[Contents](#)

[About LView Pro](#)

[Diagnosis](#)

[Device Caps](#)

File/New

This dialog window prompts for image dimensions, then creates a new image for edition. The new image background is painted with the color defined in the Options/Background Color command.

This command is useful for creating a (blank) image and then defining its contents with the Edit/Add Text command and/or the Edit/Paste command.

Retouch/Background Color

This command opens the 24-bit Color Dialog, when the image being edited has 24-bit/pixel color information, or the Palette Entry Color Dialog, when the image being edited has palette based color information. The color you define will be used to paint images created with the File/New command, and to paint image areas after the Edit/Cut or Edit/Delete commands are performed on a Selection area. When the Edit/Redimension command increases the number of columns or rows, the new image area will also be painted with this color.

When saving an image to a disk file using either the GIF87a or the GIF89a format, the background color that is currently selected will be stored in the file. This information will be read the next time the file is loaded.

When saving an image to a disk file using the GIF89a format, the background color that is currently selected may be stored as the GIF's transparent color. Check the help topic File/Properties/GIF for more information.

File/Open

This dialog window is used to select the filename containing an image to be loaded for viewing/editing. Regardless of the filename extension, the file contents are examined to determine the internal file format among the supported [Image File Formats](#).

If loading is successful, the same filename will be used in the [File/Save](#) command.



This command is also available at the Toolbar.

File/Save

Saves the image being edited using the filename obtained in the last File/Open execution. If this filename doesn't exist or is invalid, the command File/Save as will be executed instead.



This command is also available at the Toolbar (click with the RIGHT mouse button!).

File/Save as

This dialog window obtains the filename where the current image is to be saved. The format may be selected among the supported Image File Formats.



This command is also available at the Toolbar.

Image File Formats

The following image file formats are supported:

JPEG - Joint Photographers Expert Group, JFIF

Reads baseline JPEG/JFIF and progressive JPEG files
Writes JPEG/JFIF files in 3 or 1 (Grayscale) bytes per pixel, 2H2V subsampling, baseline and progressive formats

BMP - MS Windows and OS/2 bitmap

Reads and writes BMP files with 1, 4, 8 and 24 bits of color information per pixel

TIFF - Aldus' Tagged Image File Format 6.0

Reads TIFF files with 1, 4, 8 and 24 bits of color information per pixel, in strip or tile format, uncompressed or compressed with PackBits, Next compression, Thunderscan or LZW compression.

Writes TIFF files with 1, 4, 8 and 24-bits of color information per pixel, always in strip format either uncompressed or using LZW compression.

TGA - Truevision Targa

Reads TGA files with 8, 15, 16 and 32 bits of color information per pixel
Writes TGA files with 8 or 24 bits of color information per pixel, uncompressed

GIF - CompuServe's GIF87a and GIF89a

Reads and writes GIF87a and GIF89a formats
Writes transparent color and background color information when using GIF89a format

PCX - ZSoft's PCX

Reads all PCX versions, with 1, 4, 8 or 24 bits of color information per pixel
Writes PCX version 3.0, with 1, 4, 8 or 24 bits of color information per pixel

PBM, PGM and PPM - Jef Poskanzer's PBMPLUS formats

Reads PBM (Portable Bitmap, monochrome), PGM (Portable Graymap, grayscale) and PPM (Portable Pixmap) in both ASCII and RAWBITS formats
Writes PPM files in RAWBITS format

UUENCODED files

LView Pro reads files in UUENCODED format, and decodes them to their original file format.

Additional file formats may be added in future versions.

File/Properties

The Keyboard Accelerator Key 'P' may be used to open this Property Sheet. The following pages are available:

[Install](#)

[Interface](#)

[Quantizing](#)

[Memory](#)

[Printer](#)

[Slideshow](#)

[Contact sheet](#)

[JPEG](#)

[GIF](#)

[Macro Retouch](#)

[Options](#)

File/Print

This dialog window allows for Printer configuration, followed by image printout. Use the File/Printer Setup and Options/Printer commands to customize other options related to printer output.

File/Properties/Printer

In this dialog window, you specify:

- Column enlargement/shrinking percentage,
- Row enlargement/shrinking percentage:

Setting these to 100% will produce an image in the actual printer resolution,
Setting these to different values will alter the aspect ratio on resulting image,
Values greater than 100% will enlarge the corresponding dimension,
Values smaller than 100% will shrink the corresponding dimension.

- Fit to printer page

When checked will enlarge/shrink the image to maximize the printed area.

- Center

When checked will center the image printout.

File/Printer Setup

This dialog window is used for selecting and configuring the target printer. This dialog is also accessible from the File/Print command. Use this command in conjunction with Options/Printer to customize image printout.

File/Exit

This command ends this application's execution. If the current image has been edited, you will be offered to save it before exiting.

Edit/Undo

Use this command to undo the last edition made to the current image. When undoing is not possible, this menu item will be dimmed. To free memory allocated to undo buffers use the Options/Interface dialog and disable undo operations.



This command is also available at the Toolbar.

Edit/Cut

This command cuts (deletes) the image or current selection area and places it in the Clipboard. The format for clipboard image creation is set in the Options/Interface dialog. If a selection area is deleted, the background replacing it is painted using the color selected in Options/Background Color.



This command is also available at the Toolbar.

Selection Area Operations

Selection Areas are image pieces that can be processed separately from the image being edited. Most commands in the Edit Menu will be performed to the current Selection Area, if one is defined. On the other hand, commands in the Retouch Menu will only be available when no Selection Area is defined.

Introduction

Selection Area utilization is broad. They can be used to delimit an image area for cropping, to hold an image pasted from the Clipboard, to delimit an area of the editing image to be copied to the Clipboard, to duplicate or move parts of the image being edited and more. In here we will only cover the basic Selection Area operations, since all other operations follow the same principles.

A Selection Area can be in one of two states: DEFINED and DETACHED. An area is said to be DEFINED when it is visually represented by a RED/WHITE frame. The term DEFINED simply means that the user has delimited the area rectangle. When a Selection Area becomes DETACHED, its frame is changed to BLUE/WHITE colors. A DETACHED Selection Area already contains its own image information, independent of the image being edited.

Creating a DEFINED Selection Area

Click either the left or right mouse button anywhere on the image being edited, then (without releasing the mouse button) drag the mouse pointer. A Selection Area frame will be displayed delimiting the rectangular area defined by the point where you first clicked the mouse button and the current position mouse pointer position. There is no required order for Selection Area definition, the point where you initially click the mouse button may end up being any of the four corners defining the area, depending on the point where the mouse button is released. To finish Selection Area definition, simply release the mouse button in the position of your choice.

The DEFINED Selection Area frame is equipped with four handles, positioned at each of its corners. The handles are small squares exterior to the frame rectangle. By clicking either the left or right mouse button on one of these handles, the Selection Area frame may be resized for fine positioning. A DEFINED Selection Area may be moved by clicking either the left or right mouse button over one of its frame segments and dragging the mouse pointer.

Once a DEFINED Selection Area is properly positioned and sized, it is ready for being DETACHED.

Creating a DETACHED Selection Area

While many commands operate in the same fashion with DEFINED and DETACHED areas, the process of detaching a DEFINED area and creating a DETACHED one is of interest. A DETACHED Selection Area is created from a DEFINED one by clicking a mouse button anywhere inside the area frame. This operation will produce different results depending on the mouse button utilized. If the LEFT mouse button is used, the original image area contained inside the area frame is erased and painted with the color defined in

Options/Background Color. If the RIGHT mouse button is used, the original image is left unchanged, and the Selection Area will hold a copy of it.

If you detach a DEFINED Selection Area using the LEFT mouse button by mistake, the operation may be undone using Edit/Undo, if Options/Enable Undo is checked.

Moving a DETACHED Selection Area

Selection areas do not have frame handles, and cannot be resized. They can be moved by clicking either the left or right mouse button anywhere inside the area frame (or on the area frame) and dragging the mouse pointer. Release the mouse button to finish moving the DETACHED Selection Area.

Applying a DETACHED Selection Area

A DETACHED Selection Area may be applied (tiled) anywhere over the image being edited. The original contents of the image will be overwritten by the contents of the Selection Area, and the Selection Area will be destroyed.

If you apply a DETACHED Selection Area by mistake, the operation may be undone by Edit/Undo, if Options/Enable Undo is enabled.

Undefined a Selection Area

DEFINED Selection Areas may be undefined simply by clicking either the left or right mouse button outside the area frame. If the area frame covers the entire image, use Edit/Undefined.

DETACHED Selection Areas may be undefined by using Edit/Cut, Edit/Delete or Edit/Undefined.

Additional Topics on Selection Areas

The thickness of Selection Area frames can be adjusted in the Options/Interface dialog window.

Selection Area frames are animated, by default, for improved visibility over color images. Sometimes the animation process makes it difficult to visualize the mouse pointer, when it is positioned over or near a frame segment. This effect is more easily noticed when using a slower graphics card. For that reason, the animation may be optionally turned off in the Options/Interface dialog window.

Edit/Copy

This command places a copy of the image or selection area in the Clipboard. The original image or area is left unchanged. The Clipboard image format is set in the Options/Interface dialog.



This command is also available at the Toolbar.

Edit/Paste

This command is enabled whenever Device Independent Bitmap (DIB) or Device Dependent Bitmap (DDB) data is present in the Clipboard. For an explanation about these formats see the Options/Interface help topic.

The Paste operation is performed differently depending on the current state:

- If no image is currently loaded: The pasted image becomes the editing image,
- If there is an image being edited, and no selection area is defined: The pasted image is placed in a detached selection area,
- If there is an image being edited and a selection area is defined: The pasted image replaces the selection area contents, maintaining the selection area dimensions.

For more information see the Selection Area help topic.



This command is also available at the Toolbar.

Edit/Delete

This command deletes the image being edited (not the file!) or the current selection area. If a selection area is deleted, the background replacing it is painted using the color set in the Retouch/Background Color dialog.

Edit/Capture

This command allows capturing elements from the desktop into the editing image. Capturing modes are:

- Window: The contents of last window visited will be captured.
- Client Area: The contents of the client area of the last window visited will be captured.
- Desktop: The whole desktop is captured.

If no image is currently loaded, the captured image will become the new editing image.

If an image is already loaded, the captured image will become a Selection Area.

If an image is already loaded and a Selection Area is defined, the captured image replaces the selection area contents, maintaining the area dimensions.

Edit/Resize

This dialog window allows to change the dimensions of the image being edited, or Selection Area. Choose among the pre-defined dimensions, or enter custom values for Columns and/or Rows. Special options in this dialog are:

- "New size/Current size ratio" scrollbars: Allow for entering resize ratios for the new image dimensions. For example, scroll to 0.5 to reduce one dimension to 1/2 of its original value, scroll to 3.0 to enlarge one dimension three times its original value. When "Preserve aspect ratio" is checked, scrolling one of the scrollbars will affect the other scrollbar's position.
- Fit to desktop: Resizes the image to occupy the maximum desktop area. Notice that the image required scrollbars to be viewed, since window caption, menu and frame are not counted. The image will be fully visible (without being resized) in Full Screen Mode.
- Fit to max client: Resizes the image to occupy the maximum client area size. The image will be fully visible without the need of scrollbars.
- Preserve aspect ratio: When checked, will alter the selected Column or Row value to keep the original image aspect ratio



This command is also available at the Toolbar.

Registering LView Pro

Registration is performed by filling out one of the [Registration Forms](#) and sending it to MMedia Research Corp. Acceptable forms of payment are checks or money orders in U.S. dollars, and VISA or MasterCard credit cards. Payments must be made to MMedia Research, and mailed together with a registration form to:

MMedia Research
LView Pro Registration
1501 East Hallandale Beach Boulevard, #254
Hallandale, FL 33009

When credit card payment is selected, a registration form may be faxed to MMedia Research at 954-458-9698, or E-mailed to mmedia@world.std.com.

LView Pro may also be registered at CompuServe's Shareware Registration Database (GO SWREG), under ID# 7419. When registering via SWREG, there is no need to fill out one of the above forms.

File/Properties/Slideshow

Sequences of images may be loaded and displayed in an operation called a Slide Show. There are two ways to select the files for Slide Show exhibition:

- Using File/Multiple Open.

- Using Windows' File Manager to perform a Multiple File Selection and setting the "Drag&Drop Destination" to slide show in File/Properties/Interface.

This dialog window customizes the slide show behavior. Options are:

- View full screen: When checked, causes images to be displayed in Full Screen mode. If this option is selected, images may be reduced to fit the screen dimensions, when necessary. Check the option "Reduce large images to fit screen" if so desired. Note that large images are always resized when Automatic slide advancement is selected. Optionally, the filename of the image being displayed may be shown. Check the option "Show image filename" if so desired.

- Suppress error messages during slideshow: When checked, will prevent LView Pro from displaying error messages and prompting for user input, during the slideshow. It is possible that an image file is so corrupt that none of its contents can be displayed. Viewing the image with regular File/Open will display the error message.

- Shuffle slides (randomize display order): When checked, LView Pro will display the image files selected for the Slide Show in random order.

- Slide advancement: Let's the user select between Interactive and Automatic advancement. Interactive advancement waits for user input (via keyboard or mouse) before displaying the next image. Automatic advancement will display the next image after the user defined number of seconds. When automatic advancement is selected, LView Pro may also cycle through the list of selected images, and re-display the first image after the last one is shown. Check "Cycle slides" if so desired.

When Interactive slide advancement is selected, the following keyboard commands are available during the Slide Show:

- PAGE DOWN : To advance to the next image
- PAGE UP : To return to the previous image
- HOME : To return to the first image
- END : To advance to the last image
- 'F' : To display/hide the image's filename
- 'R' : To toggle between resizing the image to fit the screen and displaying it in its original dimensions
- 'D' : To delete the current file from the disk
- ESC : To stop the Slide Show

All the above commands are also available in a popup menu, which is activated by clicking the RIGHT mouse button anywhere on the screen. When a large image is displayed on its original dimensions (not resized to fit the screen), it is possible to scroll it on any direction, by clicking the LEFT mouse button and dragging the mouse pointer. When this operation is enabled, the mouse pointer will be displayed as a hand, which will grasp the image when the LEFT mouse pointer is clicked and held.

Edit/Redimension

This dialog window is similar to the Edit/Resize dialog. Redimension will not change the image's aspect ratio, but add/take columns and rows to/from the image being edited or Selection Area.

Edit/Crop

This command is only available when a Selection Area is defined. It replaces the current image by the contents of that area.



This command is also available at the Toolbar.

Edit/Undefined

This command undefines the current Selection Area.

Edit/Apply

This command is available when the Selection Area is detached. It tiles the selection area over the editing image at its current position.

Edit/Add Text

This dialog is window where you define a string of text to be added to the editing image. Text is always added to a detached Selection Area, that can be moved, applied or deleted after closing this dialog. If no area is defined, this command will create a default Selection Area in the upper left corner of the editing image. In the dialog you can define characteristics for the text to be added, such as color, background color, orientation, positioning, font, and text background transparency.

You can also move and resize the selected area while defining the text to be added, by using the "Modify Selection Area" scrollbars.



This command is also available at the Toolbar.

Edit/Flip Horizontal

Flips (mirrors) the image horizontally. If a selection area is defined, only that area will be flipped.



This command is also available at the Toolbar.

Edit/Flip Vertical

Flips (mirrors) the image vertically. If a selection area is defined, only that area will be flipped.



This command is also available at the Toolbar.

Edit/Rotate Left

Rotates the image counter clockwise, transforming rows into columns and vice-versa. If a selection area is defined, only that area will be rotated.



This command is also available at the Toolbar.

Edit/Rotate Right

Rotates the image clockwise, transforming rows into columns and vice-versa. If a selection area is defined, only that area will be rotated.



This command is also available at the Toolbar.

Multiple File Selections

To activate multiple file operations, Slideshow, Contact Sheet, Batch Conversion and Batch printing, the user must begin by defining the list of files to be processed in the operation.

The list of files may be defined by either using the [File/Multiple Open](#) dialog, or by using Window's File Manager together with drag&drop operations. This help topic covers the latter option, for information about the former see [File/Multiple Open](#).

In order to perform a multiple file selection, follow these steps:

- Open the Explorer or File Manager, and open/select a directory window containing the files. If files are present in more than one directory, use the File/Search command to gather all files in a single window,
- Click the left mouse button on the first file you want to select, release the mouse button,
- Press the CONTROL key, and WITHOUT releasing it, click with the left mouse button on each other file you want to add to the selection. Each file you click on should become highlighted to indicate that was added to the selection. All previously selected files should remain highlighted as subsequent files are added to the selection,
- After you have clicked on the last file, release the CONTROL key,
- Now, click the left mouse button on ANY of the selected files and, WITHOUT releasing the mouse button, drag the mouse pointer over this software's window (or icon, if minimized),
- Once the mouse pointer is positioned over this software's window, release the mouse button.

The files you selected will be processed by the Drag&Drop Destination function currently set in the [File/Properties/Interface](#) dialog.

Tool Bar Command List

Each tool bar icon-button selects a command also available on the menu. All icon-buttons may be utilized by clicking the LEFT mouse button and then releasing it while the mouse pointer is positioned over that icon-button. Some icon-buttons execute a different command if clicked on with the RIGHT mouse button.

A legend ("tool-tip") containing a short explanation about the function of individual ToolBar buttons will be displayed every time the mouse pointer stays positioned over a ToolBar button for a short while.

The correspondence between tool bar icon-buttons and menu commands is described below:



File/Open and File/Reopen: Left click to use Open



File/Save As: Save current image to file.



File/Multiple Open: Dialog to specify a list of files to be loaded.



Edit/Undo: Undo last editing operation.



Edit/Cut: Delete image or selection area and place it in the Clipboard.



Edit/Copy: Copy image or selection area to the Clipboard.



Edit/Paste: Insert image from Clipboard.



Edit/Crop: Transform selection area into editing image.



Edit/Resize: Enlarge/shrink editing image or selection area.



Edit/Add Text: Include text in the editing image.



Edit/Flip Horizontal: Flip editing image or selection area horizontally.



Edit/Flip Vertical: Flip editing image or selection area vertically.



Edit/Rotate Left: Rotate editing image or selection area counter clockwise.



Edit/Rotate Right: Rotate editing image or selection area clockwise.



Retouch/Gamma Correction: Brighten/darken editing image.



Retouch/Color Balance: Linear add/subtract RGB color components.



Retouch/Contrast Enhance: Add/subtract contrast.



Retouch/HSV Adjust: Change Hue, Saturation and/or Value.



Retouch/YCbCr Adjust: Change Luminance and/or Chrominance.



Retouch/Interactive RGB: Change RGB using function maps.



Retouch/Exp Enhance: Brighten image reducing contrast.



Retouch/Log Enhance: Brighten image reducing color bleeding.



Retouch/SineH Enhance: Brighten image increasing contrast.



Retouch/Grayscale: Transform image into grayscale.



Retouch/Negative: Transform image into its (photographic) negative.



Retouch/Image Filters: Apply user defined image filters.



Retouch/Palette Entry: Edit one palette entry RGB values.



Options/Full Screen: Exhibit the current image in full screen mode.



Help/About: Open the About dialog window.



Help/Contents: Activate the online Help System

File/Properties/Contact Sheet

A contact sheet is an image that groups smaller images. It can be useful for cataloging images that are related to each other. The smaller images are sometimes called "thumbnails".

This dialog window configures the following contact sheet making options: text font, text size, text attributes and position, text color, text background, image background and image dimensions. These options will be used when a Multiple File Selection is performed and the "Drag&Drop" destination in File/Properties/Interface is set to Contact sheet. A Contact sheet may also be built using the File/Multiple Open command.

Before building a contact sheet, the Contact Sheet Preview dialog will be exhibited.

24-bit Color Dialog

This dialog is used to obtain/edit a color definition. Colors are defined in terms of their Red, Green and Blue components. Each component may assume values in the range [0..255], being 0 the darkest and 255 the brightest value. Black is RGB (0, 0, 0) and White is RGB (255, 255, 255). A color is a shade of gray if its Red, Green and Blue components are all set to the same value.

A color obtained in this dialog may look different when applied to the editing image. When the Graphics Mode is not set to true color or high color, the nearest possible color will be used to represent the color selected in this dialog.

Graphics Mode

This software will run at its best in True or High color graphics mode. On a 256-color (palette based) mode, quality images can still be exhibited, by quantizing color information and creating a suitable palette for exhibition. On 16 color mode, images will not be displayed correctly. It is possible to change the graphics mode currently selected by clicking the RIGHT mouse button anywhere on the desktop (not on top of any opened windows, shortcuts or the task bar), and selecting the menu item "Properties". Then, select the tab "Settings", and change the selection on the "Color Palette" drop down list box. Below is an explanation for each mode mentioned and other useful information.

Pixel resolution: In this text, means the number of (graphic) columns and rows that can be displayed. For instance, in 640x480 pixel resolution the screen width is 640 pixels (dots) and the screen height is 480 pixels.

True Color Mode: each pixel is represented by its Red, Green and Blue color components. Each color component may assume values in [0..255], that is, each color component requires one byte for storage. One pixel, therefore, requires 3 bytes for storage and that's why True Color mode is sometimes called 24-bit/pixel color mode. The total number of different colors combinations is 2 to the 24th, more than 16.7 million colors. Some [image file formats](#) store images with 24-bit/pixel color information. jpeg is one of these formats. Nowadays there are good quality and low cost graphics cards supporting True Color mode at up to 640x480 resolution.

High Color Mode: each pixel is represented by its Red, Green and Blue color components. Each color component is defined by either 5 or 6 bits, assuming values in [0..255] with a granularity of either 8 (5 bits) or 4 (6 bits). This means that although a color component may range from 0 to 255, it can only assume values like 0, 7, 15, ..., 248, 255 (in 5 bit resolution). Nowadays there are good quality and low cost graphics cards supporting High Color mode at up to 800x600 pixel resolution.

Palette Based Mode: each pixel is represented by an index (one byte) to the currently selected Palette. A Palette is a list (an array) of Red, Green and Blue values. For instance, if a pixel value is 33, the color used to represent that pixel is obtained from the 33rd entry in the palette. Since pixels are represented by a single byte, the Palette size is limited to 256 colors. In this mode, not more than 256 colors may be displayed at the same time. To display a 24-bit color image (with potentially 16.7 million colors) using only 256 colors, a preprocessing called Color Quantizing is utilized. A standard VGA card cannot display in Palette based mode inside Windows. Standard VGA cards can only achieve 256 (simultaneous) color display at 320x200 pixel resolution, and Windows does not run in this resolution. All Super VGA cards can display in Palette based mode at up to 640x480 pixel resolution. Super VGA cards with 1MB Video Memory can display in Palette based mode at up to 1024x768 pixel resolution.

16 Color Mode: Standard VGA cards are limited to this color mode. Only 16 colors may be simultaneously displayed, and even these 16 colors cannot be fully customized for a given image, since Windows' relies on these to display interface items, like buttons, scrollbars, caption bars, selected and normal text, etc.

Changing the Graphics Mode: If you don't see an adequate color mode on the "Color Palette" drop down list box (see comment at the top of this message), you may still be able to change the graphics mode if you supply a disk with a display driver. Display drivers are available from graphics card's manufacturers, and usually a disk with Windows' drivers is supplied together with the card. If you don't have an alternative driver, contact the manufacturer to obtain one. Sometimes drivers are updated to improve performance and/or fix bugs, and it's a good idea to look for upgrades.

Color Quantizing: If your graphics card does not support True or High color, you must allow color quantizing of images when they are loaded. Color quantizing is the process of selecting a set of colors that approximate the ones required to display an image. Dithering, also recommended, is a method of combining a small set of colors together (like a Mosaic) to produce the effect of non-available colors. For instance, a tone of yellow that is not available among the palette colors can be simulated by positioning pixels in other tones of yellow very close together. This software will automatically configure the Quantizing and Dithering setup adequate for your graphics card if "Auto quantize setup" is enabled in Options/Interface. You can change the default setup using the Options/Quantizing dialog. You can also change the color representation for the image being edited, using the [Retouch/Color Depth](#) dialog.

Retouch/Color Depth

Use this dialog window to redefine the color depth of the image being edited. Color depth here means the maximum number of colors that can be used to display the image. This dialog allows for changing the color depth to the following options:

- True color image: Up to 16.7 million colors
- Palette image: Up to 256 colors

If you select True color image, your graphics card may not be able to exhibit the resulting image correctly, if you select Palette image, you can also determine the number of colors in the color palette:

- 256 colors (including Windows palette): A new palette will be created for the image or adapt the current palette to hold 256 color entries. The default Windows' colors will be included in the resulting palette.
- Windows palette (16 colors): The image being edited will be represented using only the 16 default colors (the colors Windows' uses for caption bars, buttons, text, etc.).
- Black and White: The image will be displayed using only pure Black and White pixels.
- Custom number of colors: Use this item if you want a palette based image with less than 256 and more than 16 color possibilities. The default Window's colors will always be included among the set of resulting colors.

When changing the color depth of an image from True color to Palette image it is necessary to create a new palette of colors. Then, each pixel in the original image must be mapped to one of the colors in that new palette. In the process of mapping, many colors in the image will not find a perfect match among palette colors. One approach in this case is to represent the color with the palette entry that best approximates it. Another approach is to try to represent non matching colors using not one, but a group of pixels. These pixels (like colors combinations in an impressionist painting) approximate the desired color. This last approach is called Dithering, and it will be used when the "Enable Floyd-Steinberg Dithering" option is checked.

For more information about image colors, see the [Graphics Mode](#) help topic.

Retouch/Contrast Enhance

Use this dialog window to alter the image contrast. Contrast enhancement is obtained by brightening darker pixels and darkening brighter ones (to reduce contrast) or doing the opposite (to increase contrast). Contrast offsets vary from -64 (no contrast) to +64 (maximum contrast).

Click on "Cancel" to discard any changes you have made, and terminate the dialog.

Click on "OK" to confirm the changes and terminate the dialog.



This command is also available at the Toolbar.

Retouch/Color Balance

Use this dialog window to specify increments/decrements for Red, Green and Blue color components. The values specified are added to each image pixel representation. For instance, a pixel whose current value is RGB (10, 10, 10) will become RGB (20, 10, 10) if you move the Red scrollbar to 10 and keep the others at 0. The maximum resulting value for a color component is 255 and the minimum 0, invalid results are truncated.

Editing in True color mode is a slow process. In this mode, changes will only be performed when the "Exec" button is pressed, so you can alter more than one parameter before waiting for command execution.

Click on "Cancel" to discard any changes you have made, and terminate the dialog.

Click on "OK" to confirm the changes and terminate the dialog.



This command is also available at the Toolbar.

Retouch/Grayscale

This command transforms a color image into grayscale. Each pixel is transformed into the gray pixel (Red = Green = Blue) with the (approximate) same luminosity. If you undo operations are enabled in Options/Interface, the original image may be restored using Edit/Undo.



This command is also available at the Toolbar.

Retouch/Negative

This command transforms a color or grayscale image into its photographic negative. Each pixel is has its luminosity (nearly) complemented. If undo operations are enabled in Options/Interface, the original image may be restored using Edit/Undo.



This command is also available at the Toolbar.

Retouch/Exp Enhance

Use this dialog window to set the desired level of Exponential enhancement. for all pixels in the image. Exponential enhancement brightens dark pixels in the image, while simultaneously reducing overall image contrast. It may not be adequate for images in general, but comes in handy for highly contrasted images.

Click on "Cancel" to discard any changes you have made, and terminate the dialog.

Click on "OK" to confirm the changes and terminate the dialog.



This command is also available at the Toolbar.

Retouch/Gamma Correction

Use this dialog window to specify the amount of Gamma Correction to be applied to all image pixels. Gamma correction may be used to brighten or darken the image. If "Lock RGB Scrollbars" is checked, moving one scrollbar will move the other two. Otherwise, gamma correction values may be set individually for Red, Green and Blue components. Values above 0 will brighten the corresponding color component on all pixels, values below 0 will darken the corresponding color component on all pixels. Gamma correction may not be suitable for all images, for brightening you may experiment with other commands like Retouch/Exp Enhance, Retouch/Log Enhance and Retouch/SineH Enhance.

Editing in True color mode is a slow process. In this mode, when "Lock RGB Scrollbars" is not checked, changes will only be performed when the "Exec" button is pressed, so you can alter more than one parameter before waiting for command execution.

Click on "Cancel" to discard any changes you have made, and terminates the dialog.

Click on "OK" to confirm the changes and terminate the dialog.



This command is also available at the Toolbar.

Retouch/Image Filters

Use this dialog window to execute an image filter, and/or to define a new image filter specification. Image Filters perform "averaging" operations on color components of neighbor pixels. The resulting color components for any given pixel, are calculated based on the current color components of its neighbors and itself. Some default filter specifications are pre-defined, at the beginning of the Select Filter list box. These default specifications may be freely edited, and may be later restored by clicking on the "Defaults" button. For best results, image filters should be applied to TRUE color images. To operate on palette based images, quantizing must be performed, and because of that color information loss may be noticeable.

The options and tools in this dialog are:

Selected Filter listbox: Select one of the filters in this list, either to edit its definition or to execute it in the current image.

Affected Color Components: Only color components (Red, Green and Blue) that are checked will be affected by filter execution. In most cases all three components should be checked.

Rename Current Filter: Allows the user to rename a filter specification to better describe its action. The first few filters in the list are pre-defined, while the remaining are intended to be defined (and renamed) the user. Notice that it is possible to edit/rename all filters, including the ones initially defined.

Filter Matrix: Each entry in this matrix contains a multiplier. When a filter is executed, the Filter Matrix is centered at each pixel in the image, and pixels in a 5x5 neighborhood of the center pixel (including the central pixel itself) have their color components multiplied by matrix entries. All 25 (5x5) products are added together to produce a total sum.

Division Factor: This value is utilized to divide the total sum obtained as described above. Usually, this parameter should be equal to the sum of all Filter Matrix indices, but a slightly smaller/bigger value may be used, to proportionally brighten/darken the resulting image.

Bias: The final step in applying the filter is to add the Bias parameter to the result of Total Sum / Division Factor. The value obtained here will replace the color component of the central pixel.

Click on "Default" to restore the default filter specifications. Notice that this will overwrite the first 9 filters currently defined.

Double clicking on a filter name will execute that filter and end the dialog.

Click on "Exec" to execute the filter currently selected in the Selected Filter listbox.

Click on "Save" to make edited filter definitions available in future executions of this dialog.

Click on "Cancel" to terminate this dialog and discard any changes made to the image during dialog execution.

Click on "OK" to terminate this dialog and keep changes made to the image.



This command is also available at the Toolbar.

Retouch/SineH Enhance

Use this dialog window to specify the desired level of Hyperbolic Sine enhancement for all pixels in the image. Hyperbolic sine enhancement brightens dark pixels, while simultaneously increasing overall image contrast. It may not be adequate for images in general, but comes in handy for poorly contrasted images with dark areas.

Click on "Cancel" to discard any changes you have made, and terminate the dialog.

Click on "OK" to confirm the changes and terminate the dialog.



This command is also available at the Toolbar.

Retouch/Log Enhance

Use this dialog window to specify the desired level of Logarithmic enhancement for all pixels in the image. Logarithmic enhancement brightens dark pixel, while keeping already bright ones from becoming too bright. It may not be adequate for images in general, but often produces better results than [Retouch/Gamma Correction](#) for brightening dark images.

Click on "Cancel" to discard any changes you have made, and terminate the dialog.

Click on "OK" to confirm the changes and terminate the dialog.



This command is also available at the Toolbar.

File/Properties/Options

This dialog allows the user to Save the currently set options, to select all Default options, or to Load options previously saved.

File/Properties/Install

In this dialog you may choose to:

Create or Delete a task bar group for LView Pro

Edit the list of file extensions associated to LView Pro. Double clicking on a file with one of these extensions, while using the Explorer, will activate LView Pro

Remove LView Pro from registry and quit: That means to prepare to uninstall LView Pro. Should you choose to uninstall the software, use this command and then use the Explorer to delete all of LView Pro's files.

File/Properties/Quantizing

This dialog window is similar to the one associated to the [Retouch/Color Depth](#) command. Use is to configure the resulting color depth when loading images. When "Auto quantizing setup" in [File/Properties/Interface](#) is checked, quantizing options are automatically set to adequate values for your graphics card at every execution startup. Notice that "black and white" quantizing on load is not supported for JPEG images. See [File/Properties/JPEG](#) for an explanation about it. For more information see the [Graphics Mode](#) help topic.

Keyboard Accelerator Keys

Some of the most commonly functions can also be activated through special keyboard combinations called Accelerator Keys.

Below is a list of all Accelerator Keys that are recognized:

ToolBar

- T : toggles the ToolBar from visible to invisible state

Client Area Scrolling (also available during Selection Area definition):

- PAGE UP: one page up,
- PAGE DN: one page down,
- HOME: one page left,
- END: one page right,
- UP ARROW: one row up,
- DOWN ARROW: one row down,
- LEFT ARROW: one column left,
- RIGHT ARROW: one column right

Menu Item Shortcuts:

- ALT-BACKSPACE: Edit/Undo,
- SHIFT-DEL: Edit/Cut
- CONTROL-INS: Edit/Copy
- SHIFT-INS: Edit/Paste
- CONTROL-DEL: Edit/Delete
- CONTROL-'R': Edit/Resize
- CONTROL-'F': Options/Full Screen
- CONTROL-'S': Options/Interface: Position window at: Same position
- CONTROL-HOME: Options/Interface: Position window at Left&Top
- CONTROL-END: Options/Interface: Position window at Left&Bottom
- CONTROL-PAGEUP: Options/Interface: Position window at Right&Top
- CONTROL-PAGEDN: Options/Interface: Position window at Right&Bottom
- CONTROL-'C': Options/Interface: Position window at Center
- CONTROL+'O': Options/One keystroke
- O : File/Open
- A : File/Save As
- P : File/Properties

One keystroke retouch

- CONTROL+'K': to activate the current retouch combo selected at Options/One keystroke

Licensing, Registration and Distribution

LView Pro is copyright © 1993-1995 by Leonardo Haddad Loureiro. This help topic contains legal binding information about licensing and distribution of LView Pro. If you do not agree with the conditions and rules stated in this text, please remove your copy of LView Pro.

For a summary about registration procedures, see [Registering LView Pro](#).
In this help topic:

The term "LView Pro" identifies release version 1.D of the LView Pro series.

The term "SHAREWARE version" identifies the complete package containing the Microsoft Windows 95, Intel i386 version of LView Pro. By complete package we mean: LView Pro's executable file, associated help file, readme file and registration form files. For a complete list of these files, and their filenames, refer to the [Package Contents](#) help topic. The term "SHAREWARE copy" identifies an instance of the SHAREWARE version.

The term "REGISTERED version" identifies a SHAREWARE version of LView Pro, together with registered user information. has been entered. The term "REGISTERED copy" identifies an instance of the REGISTERED version.

No component part of LView Pro may be distributed individually, disassembled, copied, reverse engineered, or altered in any form. This includes all elements in the LView Pro package, interface items, menus and dialogs, in both REGISTERED and SHAREWARE versions of the software.

Distribution

1. SHAREWARE copies may be freely distributed by individual users for trial and leisure utilization
2. SHAREWARE copies may be uploaded to Bulletin Board Systems, FTP sites, Usenet newsgroups and any network sites providing its users with access to download it for trial and leisure purposes. Bulletin Board Systems should restrict downloading charges for the SHAREWARE version to flat rate connection fees
3. SHAREWARE copies may be distributed as a component of the SimTel software collection, in CD-ROM disks published by Coast to Coast Telecommunications, and by vendors licensed and approved by Coast to Coast Telecommunications
4. SHAREWARE copies may NOT be distributed in CD-ROM disks, diskettes or any other media, without express authorization of the author, the single exception being case (3) above. Authorization for distribution may be obtained in the form of a specific, signed, "Non-exclusive Distribution License Agreement"
5. SHAREWARE copies may NOT be distributed with any software package, or be systematically recommended to users of any software system or service, without express authorization of the author. Authorization for distribution may be obtained in the form of a specific, signed, "Non-exclusive Distribution License Agreement"
6. REGISTERED copies may only be distributed by the author of LView Pro, or by

distributors who have obtained a specific, signed, "Non-exclusive Distribution License Agreement"

Non-exclusive Distribution License Agreement

A Non-exclusive Distribution License Agreement must be signed by an authorized licensor of LView Pro BEFORE:

1. Including LView Pro on a software product package
2. Distributing or explicit recommending LView Pro usage to clients and/or users of a software package or service
3. Including LView Pro on CD-ROMs, diskettes, or any other media
4. Performing any other form of distribution of LView Pro

There is no standard Non-exclusive Distribution License Agreement form. Specific rules are to be defined case by case between licensor and interested parties. Agreements may, at discretion of licensor, include customization of program interface and/or execution, partial or total disclosure of source code, maintenance and/or upgrade clauses.

Registration

Individual users or sites who wish to use this version of LView Pro as a software tool are required to register. See the help topic [Registering LView Pro](#) for more information.

Contacting MMedia Research and/or the author of LView Pro

A1: Send email to mmedia@world.std.com, mentioning LView Pro in the subject line.

A2: Visit our World Wide Web home page at: <http://world.std.com/~mmedia>

A3: Visit our ftp site: <ftp://world.std.com/ftp/vendors/mmedia>

A4: Send fax to 954-458-9698

A5: Write to:

MMedia Research Corp
Re: LView Pro
1501 East Hallandale Beach Boulevard, #254
Hallandale, FL 33009
USA

Disclaimer

By using this software you, the user, implicitly agrees with the conditions and rules stated in the help topic [Licensing, Registration and Distribution](#). If you have not read this topic yet, please read it now. If you do not agree with the conditions and rules stated in it, please dispose of all contents of this package now in your possession.

Neither the author of this software nor MMedia Research Corp accept any responsibilities for damages resulting from the use of LView software and make no warranty or representation, either express or implied, including but not limited to, any implied warranty of merchantability or fitness for a particular purpose. LView software is provided "AS IS", and you, its user, assume all risks when using it.

Acknowledgments

This software is based in part in the work of the Independent JPEG Group.

Windows, Win32s, Windows 95 and Windows NT are trademarks of Microsoft Corporation.

OS/2 is a trademark of International Business Machines Corporation.

The Graphics Interchange Format (GIF) is the Copyright property of CompuServe Incorporated. GIF (SM) is a Service Mark property of CompuServe Incorporated.

The PCX file format was created by ZSoft Corporation.

Truevision, TARGA and TGA are registered trademarks of Truevision, Inc.

TIFF (TM) is a trademark of Aldus Corporation.

Portable Bitmap Utilities, PBMPLUS and PBM, PGM, PPM formats are the copyright property of Jef Poskanzer.

Special thanks to all users who contributed with email messages, bug reports, suggestions and image files for testing.

Copyright notice for Sam Leffler's TIFF library

TIFF support is based in part on Sam Leffler's TIFF library, which requires the following copyright notice:

Copyright (c) 1988, 1989, 1990, 1991, 1992, 1993, 1994 Sam Leffler
Copyright (c) 1991, 1992, 1993, 1994 Silicon Graphics, Inc.

Permission to use, copy, modify, distribute, and sell this software and its documentation for any purpose is hereby granted without fee, provided that (i) the above copyright notices and this permission notice appear in all copies of the software and related documentation, and (ii) the names of Sam Leffler and Silicon Graphics may not be used in any advertising or publicity relating to the software without the specific, prior written permission of Sam Leffler and Silicon Graphics.

Tool Bar Positioning

The Tool Bar window may be positioned to the left or to the right of LView Pro's window. The position of the Tool Bar is updated into the initialization file every time the software execution is terminated, and retrieved at its next execution startup.

To move the Tool Bar window to either side, click the left mouse button on its caption bar. To make the ToolBar invisible, click on the button at the Tool Bar window caption. To visible, use the dialog File/Properties/Interface. The accelerator key 'T' toggles the ToolBar from visible to invisible state.

Embedded Calculator Operation

Description

This software features an embedded calculator to evaluate user defined expressions. The calculator is used to evaluate expressions entered at the Retouch/Interactive RGB dialog window.

The calculator is a simple, yet powerful expression interpreter. It accepts C-like expressions and provides: operators, built in "scientific functions", and two pre-defined constants: "e" (base for the Napierian logarithms) and "pi" (3.1415...).

Calculator function reference

Below is a list of all functions supported by the calculator, and their parameters. All trigonometric functions work in radian units.

- Log (x, b): logarithm of x on base b,
- Ln (x): Napierian logarithm of x,
- Exp (x): exponential of x,
- Sin (x): sine of x,
- Cos (x): cosine of x,
- Tan (x): tangent of x,
- Cotg (x): cotangent of x,
- Sec (x): secant of x,
- Cosec (x): cosecant of x,
- Atan (x): arc whose tangent is x,
- Asin (x): arc whose sine is x,
- Acos (x): arc whose cosine is x,
- Sinh (x): hyperbolic sine of x,
- Cosh (x): hyperbolic cosine of x,
- Tanh (x): hyperbolic tangent of x,
- Abs (x): absolute value of x.

Calculator operators

Add, subtract, multiply, divide, raise to power and module: + - * / ^ %
Boolean AND and OR: && ||
C-like ternary operator: ?:

Example expressions

$x^{0.8} + \sin(x)$

-- yields x raised to 0.8 plus the sine of x.

$x < 0.5 ? x : 0.5 - \cos(x * \pi) / 2$

-- yields x if x is smaller than 0.5. Otherwise, yields 0.5 minus half of the cosine of x times pi.

$x == 0.5 || (x < 0.25 \ \&\& \ x > 0.1) ? 1 : x$

-- yields 1 for values of x in the set $(0.1 .. 0.25) \cup \{0.5\}$. For other values of x, yields x.

Retouch/HSV Adjust

Use this dialog to edit the Hue, Saturation and Value components for all pixels in the image. Hue is a circular value denoting the "dominant" color tendency (among Red, Green and Blue). Saturation is the amount of color (0 saturation produces a grayscale image), Value is a measure of lightness, tendency to white. For Saturation and Value, scrolling to positive values will increase the component. For Hue, the scrolling extremes will take you back to Hue == 0. HSV editing may be useful to reduce/increase the amount of color in certain images, by varying the Saturation control. The Value control may be used to brighten/darken an image, although the [Retouch/Log Enhance](#), [Retouch/Exp Enhance](#), [Retouch/SineH Enhance](#) and [Retouch/Gamma Correction](#) will probably do a better job. Hue is useful to adjust some images that were originally scanned with excess of yellow or green (due to bad scanner setup).

Editing in True color mode is a slow process. In this mode, changes will only be performed when the "Exec" button is pressed, so you can alter more than one parameter before waiting for command execution.

Click on "Cancel" to discard any changes you have made, and terminate the dialog.

Click on "OK" to confirm the changes and terminate the dialog.



This command is also available at the Toolbar.

Retouch/YCbCr Adjust

This dialog window allows for Y, Cb and Cr adjustment for all pixels in the image. The YCbCr color system is utilized for TV color broadcast in Europe. Y is known as the "luminance" component, and has no effect on pixel color, but on pixel luminosity. Cb and Cr are known as the "chrominance" components, and together define the color for each pixel. Roughly speaking, Cb and Cr represent the balance between Blue and Red in relation to Green.

As in the Retouch/HSV Adjust command, YCbCr editing may be useful to correct images that were poorly scanned (in terms of color balance). While the Y component may be used to darken/brighten the image, the commands Retouch/Log Enhance, Retouch/Exp Enhance, Retouch/SineH Enhance and Retouch/Gamma Correction will probably yield better results for that purpose.

Editing in True color mode is a slow process. In this mode, changes will only be performed when the "Exec" button is pressed, so you can alter more than one parameter before waiting for command execution.

Click on "Cancel" to discard any changes you have made, and terminate the dialog.

Click on "OK" to confirm the changes and terminate the dialog.



This command is also available at the Toolbar.

Package Contents

The files composing this package are:

- lviewpro.exe - LView Pro's executable file
- lviewpro.hlp - LView Pro's help file
- iregistr.txt - The Individual User Registration form
- sregistr.txt - The Site Registration form
- readme.txt - General information
- changes.txt - History of changes

Please, read the help topic [Installation and Troubleshooting](#) if you have problems installing this software.

Please, read the contents of the help topic [Registering LView Pro](#) for necessary information about usage.

File/Properties/JPEG

Use this dialog to define JPEG input and output (compression and decompression) parameters.

Decompression parameters:

This software offers two modes for JPEG decompression: Normal and Preview. You should set options that yield higher decompression quality for Normal decompression mode, and aim for speed when choosing Preview decompression options.

If you decide to reload a file, after loading it in Preview mode, use File/Reload.

In this dialog, the mode for which options are being set is indicated at the "Jpeg decompression" title, as either "Normal" or "Preview". In order to select options for the other mode, click on the button that called "Switch to Preview mode" or "Switch to Normal mode", depending on which mode is currently being edited. The mode being edited at the time you confirm and exit this dialog (by pressing the "OK" button) will become the current decompression mode.

Because JPEG decompression offers special quantizing and dithering options, it will not perform "black and white" quantizing on load (if specified in Options/Quantizing). If color reduction to black and white is desired, it may be obtained by utilizing [Retouch/Color Depth](#).

Load grayscale: Check this box to force Jpeg images to be loaded without color information. When this option is checked, jpeg decompression is faster, and this feature may be useful in the Preview decompression setup.

Fast upsampling: Check this box to select a faster, but less precise upsampling algorithm, uncheck it to slightly improve image decompression quality. Checking this option may be useful in the Preview decompression setup.

1-pass quantize: Check this box to select a faster, but less precise quantizing algorithm, uncheck it to improve image decompression quality. This option is useful in the Preview decompression setup.

Fast dithering: Check this box to select a faster, but less precise dithering algorithm, uncheck it to improve image decompression quality. This option is useful in the Preview decompression setup.

DCT method: Choose among three methods for computing Discrete Cosine Transforms:

Integer accurate: Slower but accurate integer computation (recommended for the Normal setup),

Integer fast: Faster, less accurate integer computation (recommended for the Preview setup),

Floating point: Most accurate, but slower than the integer methods.

Scaling ratio: This option allows for loading a jpeg file using it's full dimensions (1:1), or performing a scaling of the dimensions at load time, using either one half (1:2), one fourth (1:4) or one eighth (1:8) for scaling ratio. Decompression speed rapidly increases as scaling ratio denominators grow, and this feature is certainly useful in the Preview decompression setup.

Compression parameters:

Compression quality: Can assume values from 20 to 95. The lower(higher) the value, the smaller/(bigger) the resulting file will be, yielding greater(smaller) compression ratios. Notice that there is a tradeoff between compressed file size and posterior decompression fidelity to the original image. The bigger(smaller) the compression quality the better(worse) will be the decompressed image.

Entropy optimization: When checked, jpeg compression will take longer to be processed but (usually) generate slightly smaller files.

Progressive compression: Check this option if you want to create JPEG files with progressive compression.

These type of compression allows files to be decompressed in stages of increasing resolution. This feature may be useful when transferring JPEG images through a modem, so the user may preview the image before it is completely downloaded.

Save grayscale: Check this option when compressing a grayscale image to Jpeg format. Images stored in Jpeg grayscale format produce smaller files and are decompressed faster than images stored (in Jpeg) with color information.

Confirm before saving in grayscale format: Check this option to make the software confirm each time an image is saved to Jpeg format, with the Save grayscale option checked. It is a good idea to leave this option checked, since it is possible to forget the Save grayscale option checked after saving a grayscale image. When this option is checked, a confirmation message is displayed before conducting the save operation.

In the confirmation message you have the choice of confirming the save operation (if you really want to save the image in grayscale format) by clicking on "YES", canceling the save operation, by clicking on "CANCEL" or saving the image in color Jpeg format, by clicking on "NO".

File/Properties/Memory

When main memory is low, some functions may utilize secondary memory (temporary disk files) to process. Use this dialog window to enable or disable temporary file usage, and to specify the directory where temporary files should be created.

Help/Diagnosis

Use this menu item to obtain information how to set up this software for the current graphics mode.

Related help topics are: Help/Device Caps, File/Properties/Quantizing, File/Properties/Interface ("Auto quantize setup" option), Retouch/Color Depth, Help/Device Caps and Graphics Mode.

Help/Device Caps

Use this menu item to obtain information about the display driver installed in your system. The information displayed is obtained directly from the display driver, and used by the software to configure internal image displaying strategy.

Related help topics are: [Help/Diagnosis](#), [File/Properties/Quantizing](#), [File/Properties/Interface](#) ("Auto quantize setup" option), [Retouch/Color Depth](#), [Help/Diagnosis](#) and [Graphics Mode](#).

Help/Contents

This menu item starts the help system positioned at the help Contents topic.



This command is also available at the Toolbar.

Help/About

This menu item opens a property sheet window with two tabs: "About" and "Registration". "About" contains information about LView Pro, and "Registration" allows you to register the software with a user name and an ID. Related help topics are [Package Contents](#) and Licensing and Distribution.



This command is also available at the Toolbar.

File/Multiple Open

Use this dialog window to define a list of files to be loaded. The selected files will be processed by the Open Destination function, also selected in this dialog. The behavior of the Open Destination function can be configured from this dialog. Multiple file operations can also be started by using the Windows' File Manager together with drag&drop operations. For information about this alternative see: [Multiple File Selection](#) and [File/Properties//Interface](#).

Below is a description of each dialog component:

- Current path: Indicates the drive and directory where the files in the left list box are located.
- Left list box: Contains a list of files that can be selected for loading. Selection commands are identical to the ones used in Windows' File Manager directory windows. Besides file names, this list box contains sub directories and drives by the end of the list. Double clicking the left mouse button on sub directory or drive names will reinitialize this list box with a file list from the selected sub directory or drive. For instructions on how to select files, see the [Multiple File Selection](#) help topic. We call this list box as the DIRECTORY list. Double clicking a file in this list will add it to the SELECTION list.
- List files of type: Select here the extension for files in the DIRECTORY list.
- Right list box: Contains the list of selected files. These files will be processed by the selected Open Destination function. We call this list box as the SELECTION list. Double clicking a file in this list will remove it from the list.
- Open Destination: Select here the Open Destination function. For information about Open Destination functions, see [File/Properties/Slideshow](#), [File/Properties/Contact Sheet](#), [File/Properties/Batch conversion](#) and [File/Printer Setup](#).
- Setup button: Clicking this button will open the configuration dialog window for Open Destination function. Access to these dialog windows is also available in the Options Menu.
- Select All button: Selects all files in the DIRECTORY list.
- Unselect All button: Unselects all files in the DIRECTORY list.
- Add button: Adds Selected files in the DIRECTORY list to the SELECTION list.
- Remove button: Removes Selected files from the SELECTION list.
- Add All button: Adds all files in the DIRECTORY list to the SELECTION list.
- Remove All button: Removes all files from the SELECTION list.
- Load from file button: Reads a list of filenames from a text file, adds that list to the SELECTION list.
- Save to file button: Saves the SELECTION list to a text file, for posterior usage with "Load from file".
- Preview checkbox: Checking this option will make exhibit a preview of the current file select in the DIRECTORY list or in the SELECTION list, whichever has been selected last. Unchecking will prevent preview exhibition of the current file.
- JPG Gray - Checking this option will make previews of JPEG files be exhibited in grayscale. Previewing JPEG files in grayscale is slightly faster than previewing in color. Unchecking will allow JPEGs to be previewed in color (if the JPEG file contains color information).

Click on "Cancel" to end this dialog window and discard all selections made.

Click on "OK" to begin the multiple file open operation on files in the SELECTION list.



This command is also available at the Toolbar.

Retouch/Palette Entry

This menu item activates the Palette Entry Color Dialog where one of the palette entries is selected for edition. If a palette entry is selected, the 24-bit Color Dialog is opened next, to obtain the new specification for the selected entry. If the latter dialog is confirmed, the palette entry is altered to the new specification, and the image is re-drawn. Related help topics are: Graphics Mode, Retouch/Color Depth and Options/Quantizing.

This command is only available for color palette based images.

To cancel this command, click "Cancel" in either color dialog.



This command is also available at the Toolbar.

Palette Entry Color Dialog

This dialog window exhibits all color palette entries utilized in the current image. One of the palette entries is the "currently selected entry", and is displayed surrounded by a small rectangle. The index of the currently selected entry, together with its RGB content, are exhibited in the area named "Current selection info". The commands available in this dialog are:

- Mask current selection using: when checked will make the software exhibit the current image using the current selected entry as a mask. Pixels in the current image that correspond to the current selected entry will be painted using the color specified in that entry, all other pixels will either be painted black or white. Unchecking this option will make the current image be exhibited unchanged.
- Black: When selected makes masked pixels be exhibited using the color black.
- White: When selected makes masked pixels be exhibited using the color white.

Select one of the entries by clicking the left mouse button on it, and then clicking on the "OK" button, or by double clicking the left mouse button on any of the palette entries.

To cancel the selection, click on "Cancel".

Frequently Asked Questions

This help topic provides answers and/or indicates which help topics contain answers for some frequently asked questions.

Q1: How do I set the transparent color of a GIF89a image?

A: GIF89a files may contain optional information about a transparent color. The transparent color isn't a real "color", but a palette entry. Software capable of rendering transparent colors (mainly Web browsers) will **not** paint pixels whose color is defined by the transparent palette entry, thus achieving the transparency effect. Only one transparent color (palette entry) may be stored in a GIF89a file, it is only possible to make "solid" (made of a single color) backgrounds transparent.

When saving an image to GIF89a format, LView Pro will record the palette entry selected in the dialog [Retouch/Background Color](#) as the GIF's transparent color. You can change this default behavior and prevent transparent color information from being generated, using the dialog [File/Properties/GIF](#).

The steps to create an image with transparent background would be:

1. Load the image ([File/Open](#))
2. Make sure the image is palette based:
If it is a true color image, use [Retouch/Color Depth](#) to make it palette based
Note that using dithering in [Retouch/Color Depth](#) will probably make the image's background made of more than one single color
3. Use [Retouch/Background Color](#) to select the the palette entry (the transparent "color")
You may use the Dropper to select the palette entry corresponding to one of the pixels in the image
You may use the Black and/or White masks to determine which pixels are drawn with which palette entries
4. Save the image in GIF89a format ([File/Save As](#))

Q2: Why do colors look wrong when I load an image?

A1: Your graphics card may not be able to do better than that. Check the [Graphics Mode](#) help topic for information on graphics cards capabilities and related issues.

A2: Find out if your graphics card can display at least 256: Click the RIGHT mouse button anywhere on the desktop (not on top of any windows), and select "Properties". Then, select the tab: "Settings", and see the options available at the "Color Palette" drop down list.

A3: Another possibility is that auto configuration is not being done to quantizing options. Check if "Auto quantize setup" is checked in [File/Properties/Interface](#).

A4: If everything else failed, it may be the case that the display driver is not sending correct information about the current [graphics mode](#). Check [Help/Device Caps](#) and [Help/Diagnosis](#) and see if they provide the information you would expect. If not, try

unchecking "Auto quantize setup" in [File/Properties/Interface](#), and set File/Properties/Quantize manually with for characteristics you believe your card (and driver) are set to provide.

Q3: Why is the menu item (and ToolBar button) [Retouch/Palette Entry](#) always disabled?

A: Your graphics card must be operating in True or High color mode. Check [Help/Device Caps](#) for a confirmation on that. If so, loading of 24-bit/pixel images is performed without (unnecessary) palette information. The [Retouch/Palette Entry](#) command is only available when the image being edited is palette based (check [Graphics Mode](#) for an explanation about these terms). If you want to use this command, you can use [Retouch/Color Depth](#) and transform the image into a palette based image. Be aware that if the original image is stored in 24-bit/pixel format, image quality will be lost in the process.

Q4: Why is it better to use [Retouch/Image Filters](#) on TRUE color images?

A1: Image filters will compute new color values for each pixel in the image. Even if the original image only has 256 colors (or less), the resulting image may be composed of thousands (or millions) of colors. When you use [Retouch/Image Filters](#) on a palette based image, it is assumed that the result should also be a palette based image. To produce that result, intermediate and final results are quantized, to match the number of colors in the original image.

A2: If your card can work in True or High color modes, and the image you are editing is palette based (such as images produced from GIF files), you should first use [Retouch/Color Depth](#) and promote it to True Color, and then use [Retouch/Image Filters](#). The software will then assume that resulting images should also be represented in TRUE color, and execute the image filters faster and with more precision. If you need to save the image in a palette based format, you can always use [Retouch/Color Depth](#), after you are done with filter editing, and transform the image back to palette based format.

Q5: Can files be processed from the command line?

A1: Yes. Each file specified in the command will be loaded in a Slideshow, using the currently set Options/Slideshow options.

A2: Passing a file with extension .TXT on the command line will make file names be read from that file. The .TXT file may be created using Windows' Notepad. Each file name in the .TXT file must be in a separate line.

Q6: How can I start a slideshow/contact sheet/batch conversion/batch printout?

A1: One way to perform these operations is by using Windows' Explorer together with Drag&Drop operations. See the help topic [Multiple File Selection](#) for information on how to do it.

A2: Another way is to use [File/Multiple Open](#).

Q7: How can I get help to solve a problem not covered by this help

system?

A: Write email to mmedia@world.std.com, mentioning LView Pro in the subject line. You will receive an answer.

Q8: Do I need to register (do I need to pay a fee?)

A: Yes, if you decide to keep using LView Pro you are required to fill out one of our [Registration Forms](#) and pay a fee. This version of LView Pro is a 32-bit application, and requires registration from all users.

Q9: How do I contact MMedia Research and/or the author of LView software?

A1: Send email to mmedia@world.std.com, mentioning LView Pro in the subject line.

A2: Visit our World Wide Web home page at: <http://world.std.com/~mmedia>

A3: Visit our ftp site: <ftp://world.std.com/ftp/vendors/mmedia>

A4: Send fax to 954-458-9698

A5: Write to:

MMedia Research Corp
Re: LView Pro
1501 East Hallandale Beach Boulevard, #254
Hallandale, FL 33009
USA

Retouch/Interactive RGB

This dialog window allows for definition and execution of arbitrary user defined transformation maps for the Red, Green and Blue, color components of all pixels in the image. Transformation maps are functions of a single variable yielding a single result. An example of a map is $2*x$, which simply doubles the value of original color components. In this dialog, Red, Green and Blue are treated like real (floating point) numbers ranging from 0 to 1. This domain facilitates the usage of embedded calculator functions.

If you do not want to define a map in algebraic terms, you may still draw a curve representing the desired transformation using the mouse, and unchecking the "Use Functions" checkbox.

The software stores up to 20 map definitions in its initialization file. The first 10 maps are pre-defined (but can be edited and customized by the user). Interactive RGB comes in handy when dealing with images for which none of the pre-defined Retouch Menu commands produces satisfactory results. Mappings for some of the Retouch commands (Retouch/Log Enhance, Retouch/Exp Enhance and Retouch/SineH Enhance) were actually "discovered" through experimentation with Interactive RGB. For examples on how expression definition, and a list of available functions and operators, see the Embedded Calculator Operations help topic.

Options and tools in this dialog are:

The Map Graph window: Exhibits a graphical representation of the selected map, and allows for interactive definition (by drawing with the mouse) of a map.

Ordering: Choose "None" if you do not want the mapping to be non-decreasing nor non-increasing. Choose "Increasing" if you do not want to allow $f(x) < f(y)$ for $x > y$. Choose "Decreasing" if you do not want to allow $f(x) > f(y)$ for $x > y$. Decreasing maps may be utilized to produce image photographic negative effects.

Lock RGB Graphs: Check this box if you want a single function definition, or map drawing to be utilized for Red, Green and Blue components. Uncheck this box if you want to define separate functions or map drawings for each component. Using different maps for different components may help correct color component unbalancing.

Use Functions: This item is automatically unchecked whenever drawing is done in the Map Graph Window. When this item is unchecked, the software will not consider the current function expression exhibited in the Select Function list box. When this item is checked, the software will use the function definition exhibited in the Select Function list box.

Select Function listbox: Choose one of the pre-defined functions definitions for edition or to define the map in the Map Graphic Window.

Edit Function definition: Click on this button to replace the function definition for the current item exhibited in the Select Function listbox.

Color Component: Choose which color component function will be visible in the Map Graphic Window, and editable by drawing or typing in function definitions. If Lock RGB Graphs is unchecked, each color component will store its own definition.

Click on "Exec" to execute the current Interactive RGB setup.

Click on "Save" to make edited function definitions available in future executions of this dialog.

Click on "Cancel" to terminate this dialog and discard changes made to the image.

Click on "OK" to terminate this dialog and keep changes made to the image.



This command is also available at the Toolbar.

File/Properties/Interface

Several interface options are configured in this dialog window. With few exceptions, these options usually are configured after installation, and remain unchanged afterwards. Below is an individual description for each option.

- Enable undo: memory will be allocated for undo buffers if this option is checked. In systems where main memory is relatively small, or if you edit very large images, you may turn this option off or the software will frequently run out of memory. The command [Edit/Undo](#) will not be available while this option is off.

- Auto quantize setup: If this option is on the software will automatically choose the adequate way for loading images in the current [graphics mode](#). This setup is done every time the software is loaded, and you will be prompted to accept any necessary changes. If this option is off, the software will use the parameters set in the [File/Properties/Quantizing](#) dialog. Related help topics are: [Graphics Mode](#), [Retouch/Color Depth](#), [Retouch/Palette Entry](#), [Help/Device Caps](#) and [Help/Diagnosis](#).

- Window auto-resize: Checking this option will make the software resize its window to fit the current editing image dimensions. When a perfect fit is not possible, scrollbars will be available, if Show Scroll Bars item is checked. Unchecking this option will prevent the software from automatically changing the dimensions of its window.

- Show scroll bars: When this option is checked, the software will display scroll bars whenever the current editing image cannot be fully displayed inside the software's client area. If this option is unchecked scroll bars will not be exhibited. Scrolling will still be possible during [Selection Area](#) definition and through the usage of [Keyboard Accelerator Keys](#).

- Thick [Selection Area](#) frame: This option controls the width utilized for [Selection Area](#) borders. Check it to specify a thicker and easier to move/drag area frame. If this item is unchecked, the [Selection Area](#) border width and height will be set to one pixel.

- Animate [Selection Area](#) frame: If this option is checked, [Selection Area](#) frames are animated for easier operation. Uncheck to turn animation off.

- Show ToolBar: if this option is checked, the toolbar window will be exhibited

- Confirm all save operations: Check this option receive a confirmation message before saving images to the disk. If this option is unchecked, no confirmation will be issued before saving an image when you select [File/Save](#) or click on the correspondent icon in the Tool Bar. When saving images in Jpeg grayscale format, a confirmation prompt may be exhibited regardless of this option's selection state. See [Options/Jpeg I/O](#) for more information about confirming image save operations in Jpeg grayscale format.

- Open icon after load: Check this option if you want the software to restore its window (if the window was minimized) when an image load operation is completed. Uncheck it if you prefer the software to remain minimized.

- [Full Screen](#) always on top: If this option is checked, LView Pro's [Full Screen](#) window will be positioned on top of all other windows.

- Drag&Drop destination: Selects which Open Destination function will process multiple file selections dropped to the window or icon. For more information, see [Multiple File Selection](#) and [File/Multiple Open](#).

- Image resize on load: Images may be optionally resized upon load. Check 'Never' if you do not want to use this feature, 'Only to shrink' if you only to resize images larger or wider than the maximum client window, 'Only to enlarge' if you want images smaller than the maximum client window to be enlarged, or 'Always' to resize all images upon load.

- Position window at: Selects the position where the window will be placed every time an image is loaded or image dimensions are changed. Choose among the desktop corners, the desktop center, or select 'Same position' if you do not want to use this feature.

- Clipboard copy format: One of two formats are used when copying images to the Clipboard:

. Device Independent Bitmap (DIB) format. This is the recommended format to fully describe an image in terms of color resolution, independent of the current graphics mode. This is also the format used in Windows BMP files.

. Device Dependent Bitmap (DDB) format. Some applications do not support the DIB format when pasting from the Clipboard. Use this option only when generating a Clipboard image to be pasted into one of these applications.

When pasting from the Clipboard, the software will look first for data in DIB format. In the absence of DIB data, if a DDB is present the software will paste it and convert it into DIB format. For more information see Edit/Paste.

File/Reopen

This menu item re-loads the last file loaded. This may be useful after previewing a Jpeg file and switching to Normal decompression mode. See [File/Properties/JPEG](#) for an explanation about decompression modes.

Contact Sheet Preview

This dialog allows for interactive positioning and sizing of contact sheet thumbnails. See [File/Properties/Contact Sheet](#) for information about contact sheet setup.

In this dialog, use the left mouse button to click and drag thumbnails on the Preview Window. Individual thumbnails may be resized by clicking and dragging on their frame edges (watch the mouse pointer change its shape when positioned over an edge). Whenever a thumbnail is clicked on, the information associated with it is exhibited at the bottom of the dialog window (file name, original dimensions, upper left corner on contact sheet, thumbnail dimensions, image file format). The thumbnail whose information is currently being shown is painted with a red frame.

By using the Global resize scrollbar, you can enlarge or shrink all thumbnails simultaneously. Choose percentages below 100% to shrink and above 100% to enlarge. Notice that after a global resize is performed, the scrollbar is repositioned at 100% and subsequent resize percentages will be relative to the current thumbnail sizes.

The file name associated with each thumbnail is exhibited in a rectangular frame below it. File name frames are painted blue when the frame width is sufficient to represent the whole file name string. When the frame width is too small, file name frames are painted green, to indicate that the corresponding thumbnail should be enlarged.

Click on "Reset" to restore all thumbnail positions and sizes to their initial values.

Click on "OK" to accept the current preview setup and build the Contact Sheet.

Click on "Cancel" to discard all editions you have made and cancel the operation.

Retouch/Macro Retouch

The menu command Retouch/Macro Retouch activates the current macro operation defined in the dialog File/Properties/Macro Retouch.

The dialog File/Properties/Macro Retouch configures combo retouch operations. A combo retouch operation can perform up to 8 pre-programmed retouch functions, in sequence. The current combo retouch operation is started by a keyboard accelerator key (CONTROL+'K'). Available retouch operations are:

Retouch/Gamma Correction

Retouch/Color Balance

Retouch/Contrast Enhance

Retouch/HSV Adjust

Retouch/YCbCr Adjust

Retouch/Exp Enhance

Retouch/Log Enhance

Retouch/SineH Enhance

Retouch/Image Filters

Using one keystroke retouch operations is useful when editing a series of similar images. If, for example, all images are too dark, low in contrast, and need color balancing, the user may define a one keystroke combo utilizing Retouch/SineH Enhance, Retouch/Contrast Enhance and Retouch/Color Balance in that order. Each operation is parametrized by values (in the same range as in the scrollbars present in their dialogs). Image filter operations are parametrized by the (0 based)displacement of the desired filter in the Retouch/Image Filters dialog.

Use the "Select retouch combo" list box to determine what retouch combo will be performed in reply to the CONTROL-'K' keyboard accelerator. The selected retouch combo is be edited by selecting up to 8 retouch operations in the "Combo retouch operations and parameters" window. Select the operations and parameters suitable for the images to be edited. Select the operation "No operation" to fill entries where no operation is desired. Clicking on the "Rename Macro Retouch" button allows for renaming the retouch combo currently selected.

A few retouch combo operations are pre-defined. These may be altered by the user, and restored by clicking on the "Restore defaults" button. The predefined retouch combo operations may not produce the same effect in different video monitors/graphics cards.

Installation and Troubleshooting

This version of LView Pro requires Windows 95 or Windows 3.51 with NewShell to run. It also requires a 386 or better CPU, at least 8MB main memory and a mouse or other pointing device.

This version of LView Pro does not use any external DLLs (e.g. CTL*.DLL). General installation is automatically performed when you run the software for the first time, like installation of supported file name extensions at the Explorer. You may create or remove a Task bar group for LView Pro, by using the dialog File/Properties/Install.

Edit/Full Screen

Displays the image centered in the screen. The screen background is set to black. If needed, the image is shrunk to fit completely in the screen. This mode can be automatically set when displaying images in a Slideshow.

To exit this mode, press the ESC key. Additional commands may be available by clicking the RIGHT mouse button.



This command is also available at the Toolbar.

Registration Forms

There are two types of registration forms, one for individual user registration and another for site registration, please select the one that applies:

[Individual User Registration form \(also available in file iregistr.txt\)](#)

[Site Registration form \(also available in file sregistr.txt\)](#)

LView Pro 1.D -- Individual User Registration Form

1. User information (please PRINT):

Name: _____
Address: _____
City: _____ State: _____ ZIP: _____
Country (if other than USA): _____
Phone number: (____) _____ Date (MM/DD/YY): ____/____/____
Email address: _____

2. Shipping and Handling (check one):

Email registration information to email address in (1) above.
 Mail 3.5'' DS/HD disk to mailing address in (1) above.

3. Payment and fees:

Fees are in US dollars, please do not send cash. Checks and money orders must be made payable to MMedia Research. Select form of payment (check one):

Enclosed check or money order
 Credit card payment: VISA MasterCard
Name on card: _____
Card Number: _____
Expiration Date (MM/DD/YY): ____/____/____
Signature (required if form is faxed/mailed): _____

Check all that apply and fill in the blanks:

One registered copy of LView Pro 1.D or newer..... \$30.00
 US Shipping and Handling for computer disk \$5.00
 Non US Shipping and Handling for computer disk \$12.00
 Florida residents add appropriate sales tax..... \$_____
Total:.....\$_____

4. Mail this form together with payment to:

MMedia Research Corp
LView Pro Registration
1501 East Hallandale Beach Boulevard, #254
Hallandale, FL 33009
USA

If credit card payment was selected, this form may be faxed to 954-458-9698 (Florida, USA) or emailed to mmedia@world.std.com.

LView Pro 1.D -- Site Registration Form

1. Company information (please PRINT):

Company Name: _____
Site Address: _____
City: _____ State: _____ ZIP: _____
Country (if other than USA): _____
Phone number: (____) _____ Date (MM/DD/YY): ____/____/____
Authorized representative: _____
Email address: _____

2. Shipping and Handling (check one):

- Email registration information to email address in (1) above.
- Mail 3.5'' DS/HD disks to mailing address in (1) above
(price within US: \$5.00 per disk, outside US: \$12.00 per disk)

3. Payment and fees:

Fees are in US dollars, please do not send cash. Checks and money orders must be made payable to MMedia Research. Select form of payment (check one):

- Enclosed check or money order
- Credit card payment: VISA MasterCard
Name on card: _____
Card Number: _____
Expiration Date (MM/YY): ____/____
Signature (required if form is faxed/mailed): _____

4. Pricing for the use of LView Pro 1.D or newer, per site computer
(Please write for pricing on quantities over 99 computers):

1st computer at \$30:
= \$ 30.00
 2nd to 24th computer at \$20 each: ____ x 20 = \$ _____
 Total US Shipping and Handling \$ _____
 Total Non US Shipping and Handling \$ _____
 Florida companies add appropriate sales tax..... \$ _____
Total:..... \$ _____

5. Mail this form together with payment to:

MMedia Research Corp
LView Pro Registration
1501 East Hallandale Beach Boulevard, #254
Hallandale - FL - 33009
USA

If credit card payment was selected, this form may be faxed to 954-458-9698 (Florida, USA) or emailed to mmedia@world.std.com.

File/Acquire

This command executes the TWAIN interface selected in the menu command File/Select source to acquire an image from a peripheral device.

File/Select source

This command allows the user to select the TWAIN interface to be used when the menu command File/Acquire is issued.

TWAIN

Many imaging peripheral devices (such as scanners, frame grabber cards, plotters, etc.) are shipped with TWAIN drivers. A TWAIN driver provides a standard way to retrieve imaging information from these devices. LView Pro supports TWAIN compliant devices/drivers, and is capable of interfacing with both 16 and 32-bit TWAIN drivers. The menu command File/Select source allows the user to select which TWAIN driver should be used (in case there is more than one available) when the menu command File/Acquire is selected. File/Acquire interfaces with a specific TWAIN driver to allow for image data exchange.

In order to interface LView Pro with legacy 16-bit TWAIN drivers, additional THUNKING software may be needed. TWAIN software and readme files are found on our ftp site, <ftp.std.com>, in the directory `/ftp/vendors/mmedia/lview/twain`.

File/Properties/Batch conversion

Use this dialog to select the target image file format to be used in a Batch conversion operation. Batch conversions (automatic conversion of a group of files to a new file format) may be started from the dialog [File/Multiple Open](#) or by using drag&drop operations (see [File/Properties/Interface](#), drag&drop destination).

