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V.13 RASTER IMAGING FACT SHEET

LEADTOOLS v.13 Image Processing Enhancements Include:

- The ability to resize bitmaps during the load process greatly reducing the memory overhead of loading large images for viewing.
- Ability to update a lookup table, based on a curve that passes through user specified points or based on a user specified mathematical function offering additional flexibility in remapping the colors in the image.
- Optimization of the Median filter increasing its performance.
- Picturize capabilities extended to picturize an image using a single bitmap or a list of bitmaps. When using a single image, lightening or darkening the color to match the region of the base image where it will be inserted changes each copy of the other image.
- New Motion Blur filter with control over speed and direction.
- Ability to combine images using either a single opacity value, or varying opacity values via a mask. Using the varying opacity values creates a feathering appearance.
- Gaussian blurring can be used for noise removal and results in less blurring as compared to an average blur.
- Unsharp mask, which is not as sensitive to noise in the image as other sharpen methods.
- Ability to swap color channel values across the R, G and B color channels.
- Ability to add or average bitmaps within a list to find the differences between a list of images or to combine all of the images with equal opacity.
- Support for anti-aliasing the image.
- Support for removing red-eye from images.
- Ability to resize regions within a bitmap.
- Ability to perform lossless transformations (rotate, flip and reverse) on JPEG, CMP and JPEG TIFF files. This is superior to loading the image, performing the transformation and the saving the image because there is no loss of quality and is reversible.
- New image processing functions to add borders and frames.
- Ability to automatically maintain aspect ratio when resizing an image.
- Support for histogram equalization on different color spaces (Grayscale, RGB and YUV)
- New edge detection filter.
- Control over the grain size and shape during conversion to halftone.

The Raster Imaging Pro includes upgraded color conversion support allows more conversion options to provide better color matching, flexibility and user customization capabilities.

Images can be separated and/or reconstructed to/from individual color planes using LEAD's built in conversion functions, ICC profiles or Emulation Tables.
New planes supported include:

- YIQ
- LAB
- XYZ
- YCCK
- Y41P
- UYVY
- YUY2
- YVU9
- YCC

Expanded TWAIN v 1.9 Support Includes:

Performance of Memory Buffered Transfer using the following compressions in addition to uncompressed data:

JPEG	GROUP3 1D
RLE4	GROUP3 1D EOL
RLE8	GROUP3 2D
BITFIELDS	GROUP 4
PACKBITS	

- Perform the save of the Memory Buffered Transfer data directly to a file.
- Save of the device's TWAIN capability settings to a template file, helping to save multiple settings of sources and load them as needed.
- Flexibility to get and set all TWAIN capabilities that the device's TWAIN driver supports.
- Get the Extended Image Info like barcodes or patch codes that the TWAIN drivers support.

New Image Formats Supported Include:

- MODCA PTOCA files
- IBM AFP
- Multipage IOCA\MODCA
- MODCA\IOCA MMR compressed
- MODCA\IOCA uncompressed files
- Wireless Bitmap (WBMP)
- Scitex Continuous Tone (SCT\CT)
- Intergraph CIT
- SMP

In addition, support of IPTC (International Press Telecommunications Council) objects inside of TIFF and JPEG images have been added.

New common dialogs have been enhanced with a progressive new look and feature set to include:

- Thumbnail Preview for image processing dialogs allows the user to preview the change without actually affecting the original image with an optional before and after thumbnail.
- The thumbnail preview can be zoomed and scrolled to any part of the image to see the details.
- A progress bar that indicates the status of applying the effect is available.

Additional Features

- Support for JPEG-LAB and TIFF-LAB. LAB files supports a larger gamut of colors as opposed to other color spaces.
- Ability to create curved regions.
- Ability to convert standard curved regions to Bezier curves.
- Both compress and decompress buffers.
- Support for determining whether a magnifying glass is attached to a window, a control or an object.
- Support for loading and saving layers in PSD files.
- Ability to retrieve embedded audio data and stamps contained in Exif files as extension data.
- Ability to automatically scale the image to print, fitting the page.
- Ability to automatically center the image in the LEADTOOLS imaging control.
- Ability to save TIFF files with TIFF strip options and specify user defined rows per strip.