MVIA

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INNOVATIVE

IMAGE

ANALYSIS

SOLUTIONS

MitoTracker from Molecular Probes showing bovine pulmonary artery endothelial cells: (red mitochondria, green F-actin, blue nuclei). A filter wheel was used to automatically capture 3 monochrome images and merge them together as a 24 bit color image using Northern Eclipse.

NORTHERN ECLIPSE

MVIA, Inc. Presents Northern Eclipse

MVIA, Inc. is the leading developer of image analysis and processing software. Our software has many scientific and industrial applications. The software is used for image acquisition, processing, analysis, automation, and deconvolution.

Clients include universities, research hospitals, biotech companies and industrial sites worldwide. Equipment supported includes imaging hardware, CCD cameras, framegrabbers, TTL & I/O devices, automated microscopes and peripherals. A digital camera SDK is also available.

Leaders in image analysis software providing superior cost-effective imaging workstations for research and development.

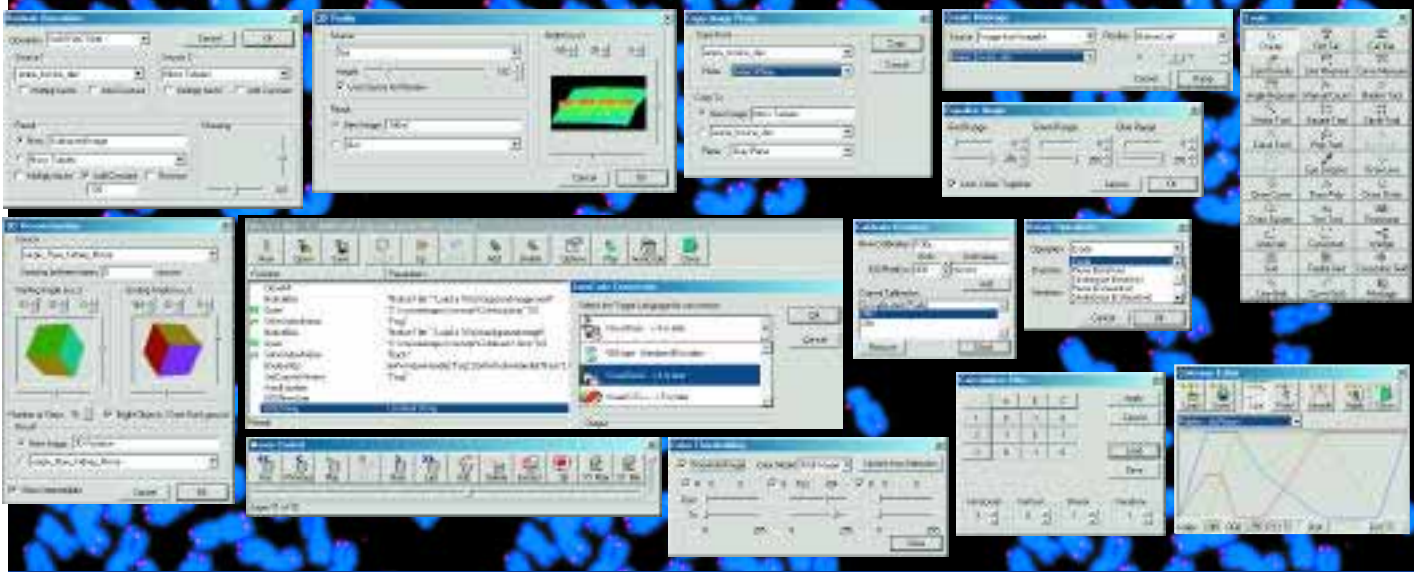*Innovative scientific and industrial applications for a wide variety of*

Versatile Functions and Tools

ding corporate and research institutions.   • Free software upgrades

Native and Third Party Plug-ins Available

2D, Nearest Neighbor, and Full Iterative Deconvolution • • • • •
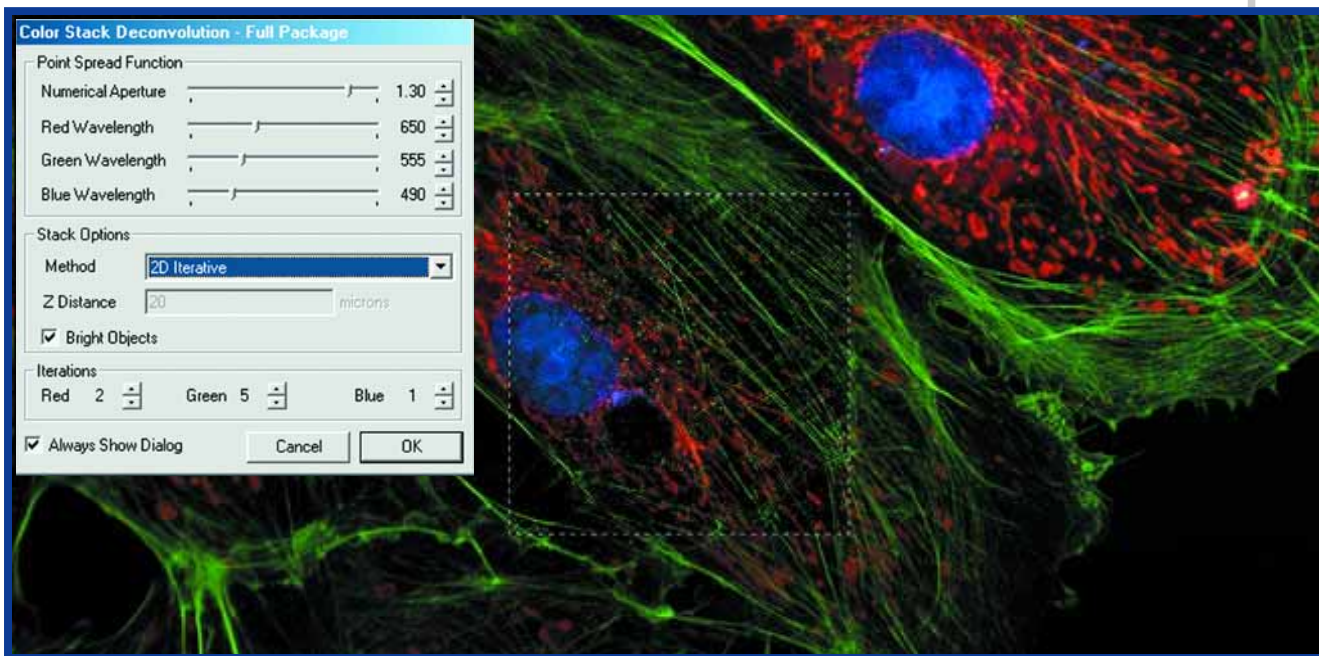
Setting the Standard for Camera Drivers
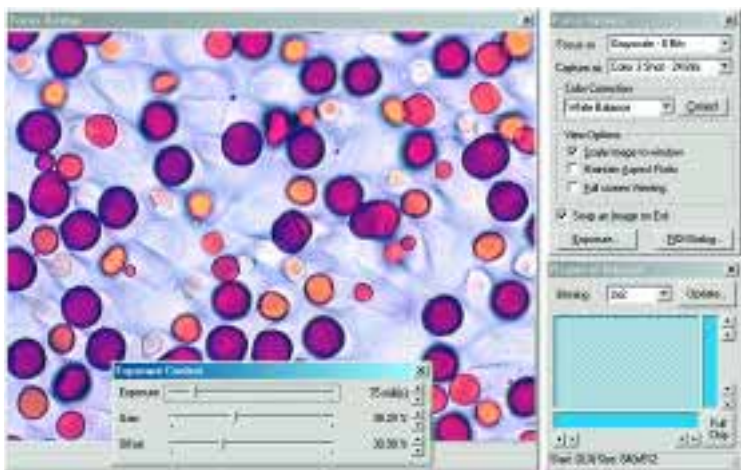
Partial List of Frame Grabbers and Cameras Supported

Vitana Cameras
Unibrain
Twain Cameras including Blind Twain
Sony XCD X700, 500 and 900 Digital Firewire
RGB and Mono Analog Cameras
Qimaging Digital Firewire Cameras
Princeton *
Photometrics *
PCO Sensicam *
Optronics Magnafire
Nikon DXM1200
Mutech MV1500
Matrox Meteor RGB
Matrox Meteor II
Integral Technologies *
Hamamatsu RS422 and Firewire
FireWire Direct Show Cameras
DVC Cameras *
Direct Show Devices
Diagnostics Cameras *
Coreco TCX *

* Not all products from these companies are supported at the time of press.
™ 'Firewire' is a registered trademark of Apple Computer Inc.

Customer support   • Application development

Applications

Brightness vs. Time
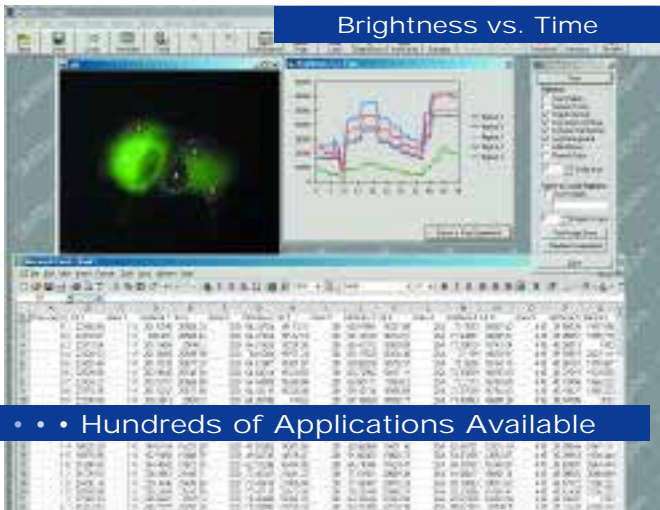
• • • • Hundreds of Applications Available

Densitometry

Ion Analysis (ie. Fura2)

Fluorescent Color Merging

Comet Analysis

Material Science

Partial List Of Features And Specifications

- Automatically generate VB or C++ code from Macro Editor.
- Multiple automation levels (macros, scripts and OLE automation).
- True 32 bit software with no embedded 16 bit code and no 16 bit DLL thunking.
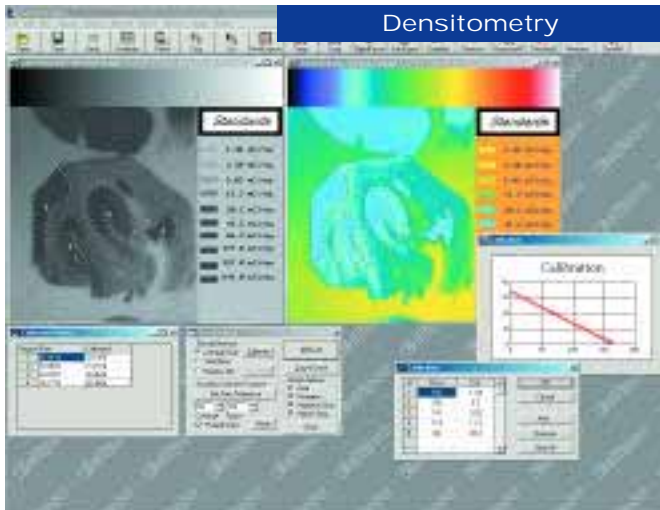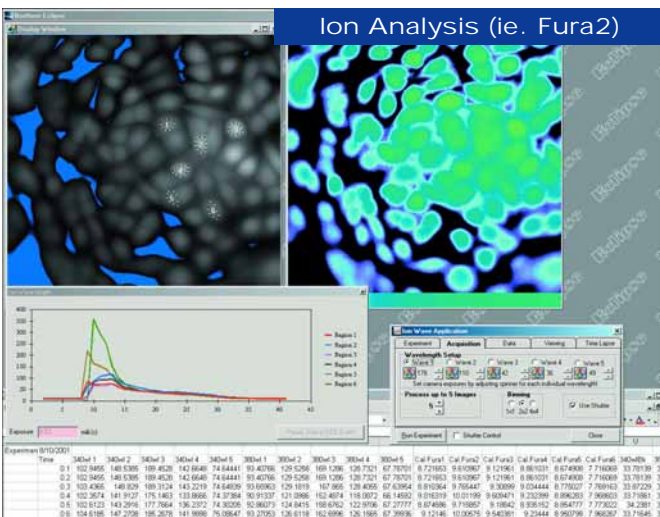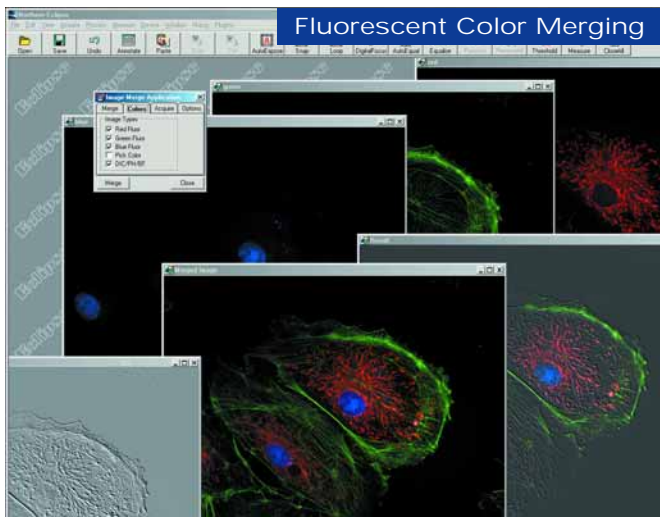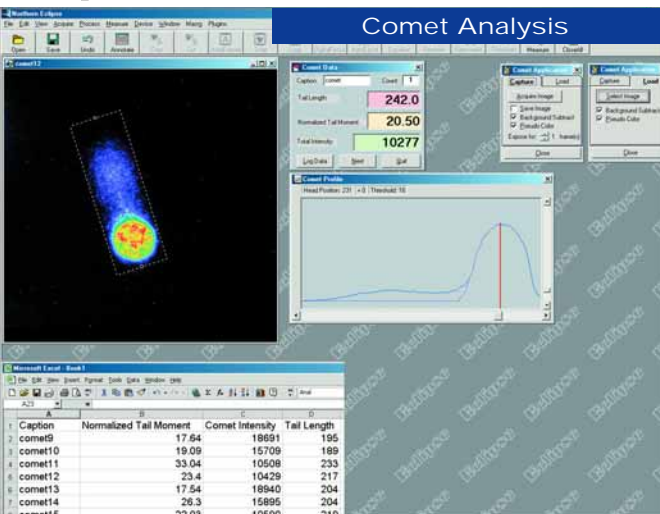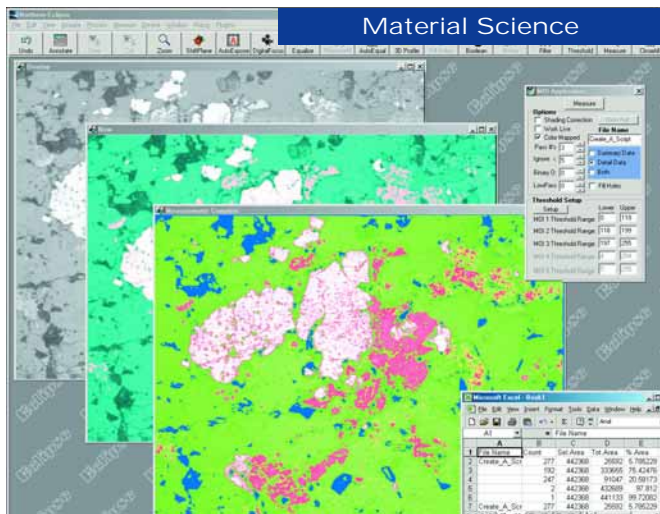- True 24 or 48 Bit RGB color acquisition (also NTSC, Monochrome, CCIR, and Y/C).
- 24 or 48 Bit color image analysis (processing and threshold in RGB or HSV).
- Morphometric and Densitometric analysis.
- Image processing including background subtraction and contrast enhancement of color or monochrome images.
- Camera control (Integration) for low light level image acquisition.
- Digital CCD fast frame rate focus routine.
- Digital CCD camera support including decimation and binning, region selection, temperature and exposure control.
- Twain support for scanners and digital cameras including blind twain.
- Real time processing of live images (averaging, subtraction, and enhancement).
- Logic and Arithmetic image functions (Boolean Math; ADD, AND, OR, XOR, DIFF, MIN, MAX, +, -, /, *, and Simple).
- Binary Operations (including Open, Close, Dilate, Erode, Prune, Skeletonize, Break Nodes, Fill Holes, and Rank Filtering Minimum, Median, and Maximum).
- Plugin feature to seamlessly add Third party dll's like Volume Rendering.
- Chroma Key for seamless image merging.
- Mesh Warp or Morph multiple images together.
- Image Rotation and Horizontal or Vertical image flipping.
- Image Resample to enlarge or reduce image size.
- Montage feature to merge stored or live images together into a large image.
- Gray Wedge stamp to help with density calibration.
- Configurable tool, script, macro and application bars and boxes.
- Radial, line, box and curved grid creation.
- FFT PlugIn (forward, reverse and edit).
- De-convolution plugin (Single Image, and full iterative image stack de-convolution).
- Drawing tools, curve, line, polygon and circle with node control.
- Counting features including manual or auto count.
- Image kernel (filter) editing or defining for image enhancement.
- 3D reconstruction, image animation, layered tiff, and AVI format.
- Multi layer (through stack) image processing including crop and threshold.
- TIFF, BMP, TGA, & SPE image support (8, 16, 24, & 48 bit image support and floating point support for FFT) and JPEG or AVI included via included plugin.
- Load IMG, JPEG, Pic, Biorad Pic, and user defined image formats.
- 3D imaging viewing in RED and GREEN or 3D Profiles.
- Compose fluorescent overlaid images using copy planes or Merger application.
- Shift image planes to correct fluorescent image alignment (pixel shift).
- Build a 24 or 48 bit RGB image with a Black and White Camera and 3 Filters.
- RGB or Monochrome image histogram in 8, 16, 24 and 48 bits.
- DDE (Dynamic Data Exchange) to send data directly to Excel. (and other programs).
- Equalization to optimize image pixel values based on image histogram values.
- Write text, arrows, circles, lines, scales, distances, and time data in any color or font.
- Definable LUTs (look up tables), or artificially color images.
- Object definition, measuring, counting, etc. (Area, Perimeter, Shape Factor, Centroid X, Centroid Y, Hole Count, Max Diameter, Orientation, Bounding Box, Min. Gray, Max. Gray, Total Gray, Average Gray, Bin Class, Object Count, Selected Area, Total Object Area, Percent Area, Summary Average Gray, Summary Total Gray, Summary Min Gray, Summary Max Gray, Traced Length or Curve Measurement. Through OLE: Standard Area Count, Calibrated Total Gray, Calibrated Average Gray, Calibrated Standards, User defined equations and many more Morphometric Parameters).
- Calibration in any unit (e.g. microns, millimeters, centimeters, meters, miles or pixels etc.)
- Automatic memorization of all the last operator settings used.
- Annotation and image retrieval based on written text in image header.
- Live or frozen image viewing within a Window or Full screen.
- Movie animation for time-lapse, 3D(Z-series), 4D(Z-series time-lapse), 5D(XYZ multiple location time-lapse) or 6D(XYZ multiple location and wavelength time-lapse).
- Image Zooming for static or live looped images.
- Create hundreds of image buffers.
- Color Correction to boost or suppress image color brightness.
- Line drawing or curve drawing for distance or length measurements.
- Rectangular, Elliptical, Polygon or Trace object selection.
- Color or Monochrome image thresholding in 8, 16, 24, or 48 bits.
- Auto threshold bright or dark objects.
- Adaptive Thresholding for background suppression or object expression.
- Color or monochrome pixel value readings.
- Manual or automatic object count and manual or automatic segmentation.
- Data filtering, binning categorization and click to reject feature.
- Up to 10 levels of Undo operations.
- Data sorting and selection from data results window.
- Third party PlugIn support.
- Camera software driver development kit available.
- Complete menu configuration.
- Serial device (.dcd) hardware communication via a simple text file. (filter wheels etc.).
- Device control (i.e. XYZ-Axis, Filter Wheels, Shutters, Microscope, VCR, Monochrometer, DG4, Light Relay Box, etc. via TTL, I/O or serial).
- Multiple camera and grabber drivers supported including Direct Show and FireWire.
- Windows on-line context sensitive help, in html format, plus written manual.
- Custom contract OLE applications available for unique imaging.