If you want the best image processor, get the best software.

From the day Gould's Library of Image processing Software (LIPS) is installed with your IP8500, you'll have an interactive system with help files, command sequence files, discrete image directories, and full interactive control of all hardware components. You can begin filtering or Fast Fourier Transform (FFT) operations immediately on your sample files, or capture and load your own images from an RS170 camera or our new Real-Time Digital Disk. Look-Up Table manipulation is precise, convenient, and fully interactive, including storage and retrieval.

LIPS is the "package deal" to meet your imaging needs.

LIPS also provides interactive software for measurement of pixels, lines, or regions of any image. Once you've analyzed your images, call a filter of any size or shape from the LIPS kernel database and execute it entirely on our four-channel Digital Video Processor at video rates. Or do spatial modifications such as rotation, translation, or warping. All interactively, all starting installation day. That's the difference between Gould software and any other package in the industry.

LIPS Version 3.0 and LIPS Plus

To assist LANDSAT, specialized classification, and recognition applications, Gould proudly announces LIPS Plus with the following features:

- **Filters:** Median, Wallis (Local Area Adaptive Histogram Equalization), Sobel, kernel of any size, block average filters, Roberts, Prewitt, Laplacian, FFT.
- **Topological Operations:** Thinning, exoskeleton, thick, hollow, fill, cut tail, raster-to-vector, vector-to-raster.
- **Statistics:** Histogram, mean value, standard deviation, variance, covariance, matrix, scattergram for training set generation and edit.
- **Classification:** Bayesian maximum likelihood, parallelepiped, Parzen window, Mahalanobis, minimum distance, Fisher discriminant, principal components, RGB to IHS transforms.

LIPS version 3.0 features the following highlights:
- Convenient system operation and image database management.
- Real-time inputs from camera or digital disk (up to 3200 images).
- Flexible radiometric operations for intensity display and modification (up to 16-bit look-up table).
- Thorough measurement and analysis—spatial and radiometric quantification. Near real-time histogramming.
- Powerful filters and transforms for mathematical data alteration.
- Geometric operations—changing the spatial relationship of data. Warp hardware will perform a 2nd order geometric transform of up to 4K x 4K images (8, 12 and 16-bits) using cubic convolution resampling. Typical warp time for 512 x 512, 8-bit, 4 x 4 cubic convolution resampling is 1 second.
- Artistic and graphic functions—embellish, rearrange, create images. Auxiliary Graphics Processor: 800,000 points/second.
- Support—training, installation, software subscription.

Write or Call and let us tell you what else is new at Gould Imaging and Graphics Division.

Gould Inc., Imaging and Graphics Division, 1870 Lundy Avenue, San Jose, CA 95131, (408) 263-7155, TWX (910) 338-7656, Eastern: (516) 736-3440, Southwest: (214) 458-0052, Western: (408) 263-7155, European: (089) 769-5037, Telex: 05-29-626 mod-d.

**IMAGE CAPTIONS**

**Top:**
- Left back corner: 2-D FFT processed in 2 minutes with LIPS Plus.
- Four 1024² medical images: multimodality, split screen display.
- Face: CT scans in 3-D modeling, plastic surgery at Mallinckrodt.
- Mountains: LIPS assists fast graphics hardware and large memory matrices with GKS-based Auxiliary Graphics Processor. Courtesy S.A.I.
- Pseudo-colored flowers: shows LUT manipulations. Note graphic load display plus intensity reference scale.
- Same 1024² flowers: shows color cut and paste in 1 frame time.
- Jars and pens: Synthetic image like #4, courtesy Pacific Data Images. Photo by Jim Weil.

**Bottom:**
- Two corners: LIPS driver supports 1024² LANDSAT imagery, courtesy NASA-Ames Research.
- Top bas relief: Matrix filter, the basis of classification and recognition. LIPS allows kernels of any shape and size and executes at video rates.
- Histogram: line or pixel analysis under LIPS.
- Spheres: fast Z-buffer merge, courtesy Rensselaer.
- Cake and strawberries: 1024² looks good enough to eat.
- Weather satellite: shows graphics overlay, courtesy MacDonald Dettwiler.