Imagine for the Macintosh II!

Imagine is an advanced image processing program built on an extensive image processing library with routines from basic operations like convolutions, histogram equalization, and convolution to more advant guard processes like 3D morphology; Imagine even supports complex (real and imaginary pairs) images, FFTs, and computed tomography (who said you can't reconstruct SPECT images on a MAC). One of Imagine's biggest advantages is its internal image format which allows a tremendous amount of flexibility by working in normalized real world coordinates (including negative pixel values) without worrying about overflows and maintain 16 bit accuracy throughout. This freedom and accuracy reduces chains of image processing tasks that would completely befuddle a 8 bit program to child's play (well almost). Try choosing the Exp function (it takes the exponential of each pixel) with an image and behold! No overflow! Can you imagine that with a 8 bit program? A second plus for Imagine is its Region of Interest (ROI) processing. You may apply 95% of Imagine's operations to just the portion of an image which lies within a ROI (each Image has 4 ROIs).

Imagine supports extensive import and exports features to help get images and data in and out of Imagine. Imagine is not intended at all to be an all in one graphics program.; there are not even any paint tools! It is intended to bring you the very best in image processing on the Mac and to work in concert with other applications should you need to paint images, prepare presentations, or perform some analysis that Imagine does not provide.

Imagine supports standard TIFF and PICT formats (PICT is not suitable for quantitative image processing and may be dropped later) as well as its own native format which handles 3 and 4 dimensional images (like CT scans or MRI cardiac). I've including a quick and dirty program we hastily wrote to convert PDP-11 images to demonstrate how to write version 1 imagine images with multiple slices (images). Imagine can view these collections of images on a slice by slice basis or in ciné mode.

The version I've placed online is a Beta form which is currently in evaluation at two local hospitals in Cleveland and at Case Western Reserve University. After evaluation and review, a more robust and significantly enhanced version (tentatively to include time series, Fourier domain filtering, volume rotations, max pix volume rendering, support for user routines, and access to the Imagine library from user routines and more) will be available with documentation at minimal cost. The Beta version does have extensive online help and anyone familiar with the Mac and image processing should have no trouble finding their way about.

Any comments, suggestions, or interests are always welcome. I may be contacted at any of the following addresses:

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Because of the large size -> long download time, you may purchase a demo disc set with the Beta Imagine and some sample medical images (PET and MRI) for $15. A complete kit with the disc set and preliminary manuscript documentation is $40. Please make checks payable to:

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