
Subject: Wanted: Image Registration Programs.
Posted by [grunes](#) on Tue, 04 Feb 1997 08:00:00 GMT
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Wanted: Image Registration Programs.

I am trying to register two images.

That is, I wish to warp one image so that its features overlay the somewhat similar features on another image.

The images I am using are sufficiently noisy and dissimilar (JPL AirSAR images of natural topography taken along orthogonal azimuth directions--i.e., most features that show in each image don't show in the other, and they are distorted somewhat in shape and a lot in brightness from each other) that it is very difficult for an operator to pick out good tie points. (Which probably eliminates the automatic IDL SAR registration software that JPL and NASA supply to do this--they expect nearly parallel azimuth directions and very similar features.)

I have looked at ENVI's image registration, which is based on user selected tie points. Unfortunately, the user interface is very clumsy, and it looks quite impractical for this application.

I even tried writing my own registration program, with a little better interface (it lets me blink back and forth between the two images, lets me choose small correlation boxes for semi-automated tie point generation, and lets me adjust tie points to try to make the local regions overlay). But I did not get very good results, on some parts of the image, even when I pick 9 widely spaced tie points and 2nd order polywarp and poly_2d calls.

Someone out there must have done this before. Is any no-cost software available? If someone else has something close, I could probably exchange my own attempts for theirs.

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