Subject: Re: Registration: still looking (dis-similar images, local variation)
Posted by Achim Hein on Wed, 19 Mar 1997 08:00:00 GMT
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Mitchell R Grunes wrote:
>
> I am still looking for software or algorithms to do a good job of
> image registration (warping one of the images so equivalent features
> overlay each other) for those cases where the two images are not
> all that similar (different sensors or from much different points
> of view), and/or where there is a LOT of elevation-induced small
> scale local variation, due to different projection-to-ground or
> layover geometries.
> Any ideas?

We are working on an automatic registration module too. We have modules for detecting layover and shadow areas, for converting slant range heights, distances and amplitudes to ground geometry, for precision phase unwrapping and last but least a precision processing algorithm.
The simplest registration (airplane geometry) works like this:
-evaluate range displacements
-design a linear function in Range
-get a constant azimuth value
-registrated pixel=rg_constant+range_linear*pixel_number
-look for a threshold i.e. 0.1 pixel
evaluate it iterativ range by range

>
> This has surely got to be one of the oldest problems in remote
> sensing, and good solutions MUST exist by now. I promise to
> post useful responses to the news groups.

But think of David Fannings post:
"Perhaps you should offer a monetary reward."

That's the point - or are there any precise SAR-algorithms for free?

Regards

Achim
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