Subject: Re: Registration: still looking (dis-similar images, local , variation)
Posted by Geoffrey D. Guttmann on Tue, 18 Mar 1997 08:00:00 GMT
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Hi Mitchell
Take a look at either of these sites for registration software:
You can find edgewarp in Bill Green's page at the University of Michigan. The URL is http://brainmap.med.umich.edu/~wdkg/
You can also try Automated Image Registration 3.0 from UCLA's Laboratory of Neurological Imaging-they register brain images!!
A current list of these references is maintained at the AIR WWW site (currently http://bishopw.loni.ucla.edu/AIR3/).

Good luck and hope this helps, geoff

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"The test of leadership is not whether you have problems; it's whether you have the same problems you had last year."-Churchill

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Subject: Re: Registration: still looking (dis-similar images, local , variation)
Posted by bro on Mon, 24 Mar 1997 08:00:00 GMT
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Hi,

I couldn't find the original posting. Could someone please send it to me, please.

I am just curious to see what the fuss is about - maybe my 2 cents could make a difference ?

--Morten

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---------- Creator of Surgery Simulation Systems ----------

Subject: Re: Registration: still looking (dis-similar images, local , variation)
Posted by Achim Hein on Tue, 25 Mar 1997 08:00:00 GMT
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Morten Bro-Nielsen wrote:
>
> Hi,
>
> I couldn't find the original posting. Could someone please send it
> to me, please.
>
> I am just curious to see what the fuss is about - maybe my 2 cents
> could make a difference ?
>
Original:
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.

Nice, rapid user interfaces (e.g., grab a point with a mouse
and drag it to the desired position on the other image,
while watching the two registered images blink back-and-forth
between each other) would surely help. The ability to apply
smooth warping splines to many small areas is a must.

Any ideas?

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.
---------- --------
Mitchell R Grunes, grunes@imsy1.nrl.navy.mil. Opinions are mine alone.

Answer 1:
Perhaps you should offer a monetary reward. :-)

Cheers!

David

David Fanning, Ph.D.

Answer 2:
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

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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http://www.nv.et-inf.uni-siegen.de/pb2/
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