Subject: Re: find rotation between two images
Posted by mperrin+news on Wed, 01 Sep 2004 23:01:52 GMT
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David Fanning <davidf@dfanning.com> wrote:
> Tobi writes:
>
>> i have several images where i would like to find the rotation and
>> shift compared to a reference image. i use an alignment routine to
>> seperate the shifting part. however, there is still the remaining
>> problem of image rotation. is there a routine available? thanks!
>
> Have you looked at ROT.

ROT will rotate the image, but I think his question is about a procedure
to automatically determine the correct rotation angle, given a
unrotated reference image.

I don't have code to do this myself, but I know there are techniques
based on Fourier transforms that do this in addition to determining
the image shift. Maybe one of these will get you started:

"Fourier-Based Image Registration Techniques"
http://www.censsis.neu.edu/hstone_fourier.pdf

"An image registration technique for recovering rotation scale and
translation"
http://www.cs.brown.edu/people/morgan/papers/(McGuire%2098)%20Registration.pdf

 B. S. Reddy and B. N. Chatterji, "An FFT-based technique for
translation, rotation and scale-invariant image registration," IEEE
Trans. Image Processing, vol. 5, pp. 1266--1271, Aug. 1996.
(I can't find this online but it was referenced from a few papers which
were...)

 - Marshall