Subject: Looking for roll correction routine
Posted by jmcfee on Wed, 05 Dec 2001 23:55:21 GMT
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Hi everyone,

I am trying to georegister some images taken by a line scanner from an aircraft. The raw images have a considerable roll component and, unfortunately, no roll information was recorded. There are a (very) few ground control points (GCPs) in the image. I tried georegistering the image using the GCPs and the Map --> Registration --> "Warp from GCPs: image to map" function of ENVI. The results were not too good. This is partly because the roll is not slow. It appears to change significantly over a few lines, whereas the few control points are spaced many lines apart. It seems that I have to do a roll correction first before the registration.

Fortunately, there is a very straight road running the length of the image (that's why I know the roll is so significant). I was planning to do the roll correction by:
1. one line at a time (or more likely a few lines at a time) -
   a. detect one edge of the road
   b. shift each line to align the current road edge pixels with the edge position of the previously corrected line or group of lines
2. do a standard ENVI georegistration on the roll corrected image.

I think I could write the roll correction portion in IDL. It's fairly straight forward, although not trivial. I think it would take a moderate amount of time and then I'd have to debug it. However, this must be a fairly common problem and I would assume that someone has already written such a routine.

If anyone knows where I could find one in IDL, C, MATLAB or any high level language, I would greatly appreciate it.

Many thanks in advance

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