
Subject: Re: Need GOES Image Expert
Posted by [David Fanning](#) on Tue, 18 Mar 2008 20:39:22 GMT
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Kenneth P. Bowman writes:

> There goes my chance for fame. :-(

Well, hang on. There's still trouble in River City,
and it rhymes with "p", and it stands for "projection".

I got a little too excited before. :-)

It's pretty good. Not bad. But not bang on right, either.

If I open a GeoTIFF file like this AVHRR file here:

http://www.dfanning.com/map_tips/tiffoverlay.html

Then I can find the UV bounding box by using the tie-points,
the scales, and the size of the image:

```
s = Size(image, /Dimensions)
xscale = geotag.ModelPixelScaleTag[0]
yscale = geotag.ModelPixelScaleTag[1]
tp      = geotag.ModelTiePointTag[3:4]
```

```
xOrigin = tp[0]
yOrigin = tp[1] - (yscale * s[1])
xEnd = xOrigin + (xscale * s[0])
uv_box = [xOrigin, yOrigin, xEnd, yEnd]
```

This assumes that the image is "squared-up" with the UV
coordinate system.

Unfortunately, my image is NOT "squared-up" with the UV
coordinate system. It is tilted a little bit. Here are
the four corners of my warped image in UV space, after
I warped the lat and lon arrays and converted the corner
points to UV space. (Starts in lower-left and goes clockwise.)

```
-2361218.9   -1869566.0
-2373277.4    1841973.4
 2360269.4    1842014.4
 2348276.6   -1869524.8
```

Thus, when I try to treat it as if it were the AVHRR image
above, I *almost* get it right, but not quite. I think I need

some way to "square up" this image with the UV coordinate system. Unfortunately, it is not a simple rotation, because the image itself is not a rectangle in this warped space. It's a squarish blob. :-(

I'm looking for drugs or ideas, either one will do.

Cheers,

David

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David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")
