Subject: Re: Associating GeoTiFF tags with basic Mercator projection parameters?
Posted by BLesht on Wed, 05 Jan 2011 03:38:09 GMT
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Just to close this thread with something that may be of use to anyone
who has a similar problem, David's suggestion of following the steps
described in his article

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

was right on.

Because I already had a projected image, I skipped the warping part
and started with using MAP_PROJ_INIT to set up the projection. I used
the GCTP version of the Mercator projection and specified the equator
as the TRUE_SCALE_LATITUDE. Because my files were based on a subset
of the original map, I used the subset geographic boundaries to define
the LIMIT vector in the MAP_PROJ_INIT and in the MAP_PROJ_FORWARD
procedure. The resulting GeoTiFF files have the correct map
information.

```
MercMap = MAP_PROJ_INIT(105, /GCTP,                    $ ; Mercator
          ELLIPSOID = 8,                    $ ; WGS84
          LIMIT = [lr_lat, lr_lon, ul_lat, ul_lon], $ ; Corners
should be enough
          CENTER_LONGITUDE = center_lon,          $
          TRUE_SCALE_LATITUDE = 0.0)

uv = MAP_PROJ_FORWARD([left_lon, top_lon, right_lon, bottom_lon], $
               [left_lat, top_lat, right_lat, bottom_lat], $
               MAP_STRUCTURE=MercMap)

xscale = ABS(uv[0,0] - uv[0,2])/(s[0])
yscale = ABS(uv[1,1] - uv[1,3])/(s[1])
tp = [uv[0,0], uv[1,1]]
;
g_tags = { $
         ModelPixelScaleTag: [xscale, yscale, 0], $
         ModelTiepointTag: [0, 0, 0, tp, 0], $
         GTModeTypeGeoKey: 1,              $ ; Geographic
         GTRasterTypeGeoKey: 1,            $ ; Pixel represents
area
         GeographicTypeGeoKey: 4326,       $ ; WGS84
         GeogLinearUnitsGeoKey: 9001,      $ ; meters
         GeogAngularUnitsGeoKey: 9102,     $ ; angular degree
         ProjectedCSTypeGeoKey: 32767,     $ ;
         ProjectionGeoKay: 32767,          $ ;
         ProjCoordTransGeoKey: 7,          $ ; Mercator
```

```
ProjLinearUnitsGeoKey: 9001,        $ ;
ProjNatOriginLongGeoKey: center_lon $
ProjNatOriginLatGeoKey: 0.0,        $
ProjFalseNorthingGeoKey: 0,         $
ProjFalseEastingGeoKey: 0,          $
ProjScaleAtNatOriginGeoKey: 1.      $
}
```

Thanks again, David.

On Jan 4, 11:42 am, Barry Lesht <ble...@gmail.com> wrote:
> Thanks, David. I tried that early on, but went to the angular measure
> (adding the GeogAngularUnitsGeoKey) for some reason (maybe I saw a
> different example somewhere). I'll give it another go. By the way,
> have nice recollections of IDL course you taught way back "in the
> day." Still telling "Coyote stories?" Barry