
Subject: Re: shifted .kml created with IDL
Posted by [David Fanning](#) on Tue, 31 Jul 2012 11:56:40 GMT
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Titan writes:

```
> unfortunately it does not work or probably I'm still missing something :(
> Using the following code I get coordinates that are pointing to an area near Corsica!!
>
> mapCoord_Google_earth = MAP_PROJ_INIT('Mercator', Datum=8)
> lonlat_Google_Earth = MAP_PROJ_INVERSE([xLL,yLL,xUR,yUR],
MAP_STRUCTURE=mapCoord_Google_earth)
>
> lon_range_Google_Earth=[lonlat_Google_Earth[0,0],lonlat_Google_Earth[0,1]]
> lat_range_Google_Earth=[lonlat_Google_Earth[1,0],lonlat_Google_Earth[1,1]]
>
> UL_lat_Google_Earth=lonlat_Google_Earth[1,1]
> UL_lon_Google_Earth=lonlat_Google_Earth[0,0]
>
> LR_lat_Google_Earth=lonlat_Google_Earth[1,0]
> LR_lon_Google_Earth=lonlat_Google_Earth[0,1]
>
> print,'UL_lat_Google_Earth',UL_lat_Google_Earth
> print,'UL_lon_Google_Earth',UL_lon_Google_Earth
> print,'LR_lat_Google_Earth',LR_lat_Google_Earth
> print,'LR_lon_Google_Earth',LR_lon_Google_Earth
>
> UL_lat_Google_Earth      47.512672
> UL_lon_Google_Earth      4.4728665
> LR_lat_Google_Earth      45.054882
> LR_lon_Google_Earth      7.7499209
>
> What I'm doing wrong?!?
```

Pretty much everything, as far as I can tell. ;-)

Let's see. I think the goal was to take an image that is in a GeoTiff file and in one map projection (which one?) and convert it to another map projection (that we presume is a Mercator map projection), so we can make a KML file that overlaps.

So, we need:

1. A map structure that represents the image in the GeoTiff file.
2. A map structure that represents the map projection we

want to eventually get the image into (Google Earth's map projection.

3. Some method to convert from one map projection to the other.

If we are lucky, we can get the map structure for (1) from cgGeoMap. That will save us about 10 hours of work pawing though the GeoTiff documentation!

```
mapCoord = cgGeoMap(geoTiffFileName)
geoTiffMapStruct = mapCoord -> GetMapStruct()
```

We get the second map structure for (2) the way you set it up.

```
geMapStruct = Map_Proj_Init('Mercator', /GCTP, Datum=8)
```

For (3), we use Map_Proj_Image. We convert the XY projected meter values of the geoTiff image into the XY projected meter values of the Goggle Earth image. Then, convert those XY projected meter values into the lat/lon values we want to save in our KML file.

If we have done all this correctly (we make MANY assumptions that we hope are correct!), we will have shifted the lat/lon values in the GeoTiff image just a little bit, so that they align with the lat/lon values on a Google Earth map.

Cheers,

David

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

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