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Subject: How to extract pixel values from a GeoTIFF using an Esri Shapefile  
Posted by [Paul Magdon](#) on Thu, 23 Dec 2010 20:53:55 GMT

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Dear all,  
currently I am developing an pure IDL (No ENVI functions) based remote sensing application which involves supervised classification.  
Therefore I need to import a Geotiff with the raster data plus an ESRI shapefile (Polygons) with the trainings-data. I then converted the shape file to an IDLanROI object and build a mask using IDLanROI::ComputeMask method. At this point I got stuck as I don't know how spatially link both image and roi even when they are in UTM projection.

Here is my code so far:

```
;Import Multispectral Geo TIFF
img=READ_TIFF('some_multispectral.tiff',GEOTIFF=geokeys,inte rleave=2,)
s= SIZE (img, /DIMENSIONS)
```

```
;Setup Map projection based on GeoTIFF tags (UTM 17N, Wgs84)
mapCoord = GeoCoord(img(*,*,1),geokeys)
mapStruct = mapCoord -> GetMapStructure()
```

```
;import shapfile (aggain UTM 17N, Wgs84)
myshape=OBJ_NEW('IDLffShape', 'some_esri_multipolygone.shp')
```

```
;Get the first polygon
ent=myshape->IDLffShape::GetEntity(1)
```

```
;Convert SHP to ROI object
myroi = OBJ_NEW( 'IDLanROI', ( *ent.vertices)[0,*] ,(*ent.vertices)
[1,*] )
```

```
;Apply ComputMask method
maskResult = myroi -> ComputeMask(DIMENSIONS = [s[0],
s[1]],MASK_RULE=2)
```

```
; Here starts the problem; I have a 5000x5000 raster (img) and the
image coordinate system start with [0,0] but the myroi coordinates are
much higher (eg 227984.00 ; 991472.00) Thus everything is masked.
;There is a keyword LOCATION for ComputeMask but I am not sure how to
use it and where to get the right values for it
```

```
index= WHERE(maskResult gt 0)
subset=img(index)
```

```
OBJ_DESTROY, myshape
OBJ_DESTROY, myroi
```

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