
Subject: Re: multiple entities in shapefile

Posted by [PimK](#) on Fri, 26 Nov 2010 13:32:04 GMT

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On Nov 26, 7:52 am, Klemen <klemen.zak...@gmail.com> wrote:

> This is an example how to write polygons (pixel positions for MODIS

> images). Perhaps it helps.

>

> PRO modis_geolocation, in_filegeo

>

> ; Restore global data

> global_data

> restore, 'data.sav'

> ; Open EOS-HDF

> i_fidgeo = EOS_SW_OPEN(in_filegeo, /READ)

> if i_fidgeo eq -1 then begin

> print, 'The input geolocation file does not exist or is not EOS

> HDF format!'

> stop

> endif

> i_NSwathgeo = EOS_SW_INQSWATH(in_filegeo, s_SwathListgeo)

> i_swathIDgeo = EOS_SW_ATTACH(i_fidgeo, s_SwathListgeo)

> ;attach

> object

> i_status_read = EOS_SW_READFIELD(i_swathIDgeo, "Longitude", m_lon)

> ;read longitude

> i_status_read = EOS_SW_READFIELD(i_swathIDgeo, "Latitude", m_lat)

> ;read latitude

> i_status_read = EOS_SW_READFIELD(i_swathIDgeo, "SensorZenith",

> m_zen) ;read longitude

> i_status_read = EOS_SW_READFIELD(i_swathIDgeo, "SensorAzimuth",

> m_azm) ;read latitude

> i_status_detach = EOS_SW_DETACH(i_swathIDgeo)

> i_status_close = EOS_SW_CLOSE(i_fidgeo)

> i_array_size = size(m_lat)

> i_col = i_array_size[1]

> i_lin = i_array_size[2]

>

;XX

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>

>

;XX

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> ;Define attributes of ESRI shape file
> n_shp = in_filegeo + 'swath.shp' ;ime
> mynewshape=OBJ_NEW('IDLffShape', n_shp, /UPDATE,
> ENTITY_TYPE=5) ;nov polygon shape
> mynewshape->IDLffShape::AddAttribute, 'longitude', 5, 6,
> PRECISION=2 ;0
> mynewshape->IDLffShape::AddAttribute, 'latitude', 5, 6,
> PRECISION=2 ;1
> mynewshape->IDLffShape::AddAttribute, 'sat_zenith', 5, 6,
> PRECISION=2 ;2
> mynewshape->IDLffShape::AddAttribute, 'sat_azimuth', 5, 6,
> PRECISION=2;3
> entNew = {IDL_SHAPE_ENTITY}
> attrNew = mynewshape->IDLffShape::GetAttributes(/
> ATTRIBUTE_STRUCTURE)
> ;Write shape file
> indx = 0L
> j1 = 500L
> j2 = 600L
> i1 = 1L
> i2 = 1352L
> m_coordinates = make_Array(i_col, i_lin, 8)
> dy = make_Array(i_col)
> for j=j1,j2 do begin
> print, j
> y1 = (j / 10L) * 10L
> y2 = y1 + 9L
> dy[i1:i2] = (m_lat[i1:i2,y1] - m_lat[i1:i2,y2]) / 10.
> ;for i=2L,i_col-3L do begin
> for i=i1,i2 do begin
> ;compute corner coordinates for each pixel
> m_coordinates[i,j,3] = (m_lon[i,j] + m_lon[i-1,j] + m_lon[i,j-1]
> + m_lon[i-1,j-1]) *0.25
> m_coordinates[i,j,2] = (m_lon[i,j] + m_lon[i+1,j] + m_lon[i,j-1]
> + m_lon[i+1,j-1]) *0.25
> m_coordinates[i,j,1] = (m_lon[i,j] + m_lon[i+1,j] + m_lon[i,j+1]
> + m_lon[i+1,j+1]) *0.25
> m_coordinates[i,j,0] = (m_lon[i,j] + m_lon[i-1,j] + m_lon[i,j+1]
> + m_lon[i-1,j+1]) *0.25
> m_coordinates[i,j,7] = (m_lat[i,j] + m_lat[i-1,j] + dy[i]) *0.5
> m_coordinates[i,j,6] = (m_lat[i,j] + m_lat[i+1,j] + dy[i]) *0.5
> m_coordinates[i,j,5] = (m_lat[i,j] + m_lat[i+1,j] - dy[i]) *0.5
> m_coordinates[i,j,4] = (m_lat[i,j] + m_lat[i-1,j] - dy[i]) *0.5
>
> ;SHAPE
> JUMP1: entNew.ISHAPE = indx
> entNew.SHAPE_TYPE = 5 ;geometry
> entNew.BOUNDS[0] = min(m_coordinates[i,j,0:3])

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>   entNew.BOUNDS[1] = min(m_coordinates[i,j,4:7])
>   entNew.BOUNDS[2] = 0.00000000
>   entNew.BOUNDS[3] = 0.00000000
>   entNew.BOUNDS[4] = max(m_coordinates[i,j,0:3])
>   entNew.BOUNDS[5] = max(m_coordinates[i,j,4:7])
>   entNew.BOUNDS[6] = 0.00000000
>   entNew.BOUNDS[7] = 0.00000000
>   entNew.N_VERTICES = 5
>   v_vertices = [reform(m_coordinates[i,j,0:3], 1,4), $
>                 reform(m_coordinates[i,j,4:7], 1,4)]
>   v_vertices = [[v_vertices], [m_coordinates[i,j,
> 0],m_coordinates[i,j,4]]]
>   p_pointer = ptr_new(v_vertices)
>   entNew.VERTICES = p_pointer
>   attrNew.ATTRIBUTE_0 = m_lon[i,j]      ;atributes
>   attrNew.ATTRIBUTE_1 = m_lat[i,j]
>   attrNew.ATTRIBUTE_2 = m_zen[i,j]
>   attrNew.ATTRIBUTE_3 = m_azm[i,j]
>   mynewshape->IDLffShape::PutEntity, entNew
>   mynewshape->IDLffShape::SetAttributes, indx, attrNew
>   indx++
>   endfor
> endfor
>
> ;Close shapefile
> OBJ_DESTROY, mynewshape
>
> end

```

Excellent! Thanks Klemen your example showed my what I was doing wrong. I did'nt update the iSHAPE field, so all entries were overwritten.

Thanks again for sharing your code.

Cheers.