
Subject: Re: Point within country boundary
Posted by [Fabzi](#) on Tue, 28 Jan 2014 15:05:21 GMT
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On 28.01.2014 14:01, Fabien wrote:

> Matt,
>
> I think you are aware that they are not doing the same thing.
> ComputeMask things "pixels", containPoints thinks "(grid) points".
>
> Cheers
>
>

Just for the record ;-), a small programm that illustrates the difference:

pro illustrate_contain_points

```
grid = cgScaleVector(FINDGEN(5,4),0,254)

points_X = (FINDGEN(5)+0.5) # (LONARR(4) + 1)
points_Y = (FINDGEN(4)+0.5) # (LONARR(5) + 1)

shape_x = [1.2, 3.9, 2.3, 1.2]
shape_y = [1.2, 2.3, 3.7, 1.2]
roi = IDLanROI(shape_x, shape_y)

cgLoadCT, 33 & TVLCT, 130, 130, 130, 255 & cgWindow
cgImage, grid, /KEEP_ASPECT_RATIO, /AXES, /ADDCMD, TITLE="
cgPolygon, shape_x, shape_y, /ADDCMD, COLOR='black', THICK=2
cgPlotS, points_X, points_Y, PSYM=16, /ADDCMD

mask = roi->ComputeMask(DIMENSIONS=[5,4], $
    PIXEL_CENTER=[0.5,0.5], MASK_RULE=2)
grid_ = grid
grid_[where(mask ne 0)] = 255

cgLoadCT, 33 & TVLCT, 130, 130, 130, 255 & cgWindow
cgImage, grid_, /KEEP_ASPECT_RATIO, /AXES, /ADDCMD, $
    TITLE='Compute Mask, RULE=2'
cgPolygon, shape_x, shape_y, /ADDCMD, COLOR='black', THICK=2
cgPlotS, points_X, points_Y, PSYM=16, /ADDCMD

mask = roi->ComputeMask(DIMENSIONS=[5,4], $
    PIXEL_CENTER=[0.5,0.5], MASK_RULE=1)
grid_ = grid
grid_[where(mask ne 0)] = 255
```

```
cgLoadCT, 33 & TVLCT, 130, 130, 130, 255 & cgWindow  
cgImage, grid_, /KEEP_ASPECT_RATIO, /AXES, /ADDCMD, $  
  TITLE='Compute Mask, RULE=1'  
cgPolygon, shape_x, shape_y, /ADDCMD, COLOR='black', THICK=2  
cgPlotS, points_X, points_Y, PSYM=16, /ADDCMD
```

```
mask = mask * 0  
cp = roi->ContainsPoints(points_X, points_Y)
```

```
cgLoadCT, 33 & TVLCT, 130, 130, 130, 255 & cgWindow  
cgImage, grid, /KEEP_ASPECT_RATIO, /AXES, /ADDCMD, $  
  TITLE='Contain Points'  
cgPolygon, shape_x, shape_y, /ADDCMD, COLOR='black', THICK=2  
cgPlotS, points_X, points_Y, PSYM=16, /ADDCMD  
cgPlotS, points_X[where(cp)], points_Y[where(cp)], $  
  PSYM=16, COLOR='dark grey', /ADDCMD
```

```
end
```
