Subject: Re: IDL ROI Objects
Posted by Fabzi on Thu, 29 Jan 2015 10:50:10 GMT
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On 29.01.2015 11:05, David B wrote:
> IDl>Are you looking at the floor or the sky?

For the record, a better "tutorial" here:

```
PRO ROIPolygonAlternativeView

poly = [[0.8, 1.7, 2.7, 2.7, 0.8], [0.2, 2.2, 2.2, 0.2, 0.2]]

nn = 4
centersX = transpose(fltarr(nn)+1) ## (INDGEN(nn)+ 0.5)
centersY = transpose(INDGEN(nn)+ 0.5) ## (fltarr(nn)+1)

TVLCT, cgColor('red6', /Triple), 255
TVLCT, cgColor('white', /Triple), 1

cgDisplay, 700, 800
pos = cgLayout([2,2], OXMARGIN=[2, 2], OYMARGIN=[3, 4], XGAP=2, YGAP=6)


; Rule 0
p = OBJ_NEW('IDLanROI', poly[*,0], poly[*,1])
mask = p->ComputeMask(DIMENSIONS=[nn, nn], MASK_RULE=0)
anImage = BytArr(nn,nn)+1B
anImage[Where(mask EQ 255)] = 255
po = pos[*,0]
cgImage, anImage, /AXES, /SAVE, POS=po, TITLE='RULE 0', /NOERASE
cgPlotS, centersX, centersY, PSYM=16, /DATA
cgPlotS, poly[*, 0]+ 0.5, poly[*, 1]+ 0.5, COLOR='green', /DATA, THICK=3
cgPlot, [1], XRange=[0,4], YRange=[0,4], /NoData, $
    YTickLen=1.0, XTickLen=1.0, POS=po, /NOERASE

; Rule 1
p = OBJ_NEW('IDLanROI', poly[*,0], poly[*,1])
mask = p->ComputeMask(DIMENSIONS=[nn, nn], MASK_RULE=1)
anImage = BytArr(nn,nn)+1B
anImage[Where(mask EQ 255)] = 255
po = pos[*,1]
cgImage, anImage, /AXES, /SAVE, POS=po, TITLE='RULE 1', /NOERASE
cgPlotS, centersX, centersY, PSYM=16, /DATA
cgPlotS, poly[*, 0]+ 0.5, poly[*, 1]+ 0.5, COLOR='green', /DATA, THICK=3
cgPlot, [1], XRange=[0,4], YRange=[0,4], /NoData, $
    YTickLen=1.0, XTickLen=1.0, POS=po, /NOERASE
```

```
; Rule 2
p = OBJ_NEW('IDLanROI', poly[*,0], poly[*,1])
mask = p->ComputeMask(DIMENSIONS=[nn, nn], MASK_RULE=2)
anImage = BytArr(nn,nn)+1B
anImage[Where(mask EQ 255)] = 255
po = pos[*,2]
cgImage, anImage, /AXES, /SAVE, POS=po, TITLE='RULE 2', /NOERASE
cgPlotS, centersX, centersY, PSYM=16, /DATA
cgPlotS, poly[*, 0]+ 0.5, poly[*, 1]+ 0.5, COLOR='green', /DATA, THICK=3
cgPlot, [1], XRange=[0,4], YRange=[0,4], /NoData, $
    YTickLen=1.0, XTickLen=1.0, POS=po, /NOERASE

; Contains points
p = OBJ_NEW('IDLanROI', poly[*,0], poly[*,1])
mask = p->ContainsPoints(centersX[*]-0.5, centersY[*]-0.5)
anImage = BytArr(nn,nn)+1B
p = where(mask eq 1)
po = pos[*,3]
cgImage, anImage, /AXES, /SAVE, POS=po, TITLE='CONTAINS POINTS', /NOERASE
cgPlotS, centersX, centersY, PSYM=16, /DATA
cgPlotS, centersX[p], centersY[p], PSYM=16, /DATA, COLOR='red'
cgPlotS, poly[*, 0]+ 0.5, poly[*, 1]+ 0.5, COLOR='green', /DATA, THICK=3

end
```