

---

Subject: Re: IDL ROI Objects

Posted by [David Fanning](#) on Wed, 28 Jan 2015 14:12:32 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

David B writes:

> Thanks for taking a look anyhow! I seem to have a talent for breaking IDL functions lately.

A useful talent. :-)

Here is a piece of code that I think dramatically shows the problem:

```
.*****  
,  
PRO ROI_BUG  
poly = [[5, 10, 10, 5, 5], [5, 5, 10, 10, 5]]  
cgDisplay, 600, 600, WID=0, Title = 'Polygon Fill'  
cgPlot, [1], XRange=[0,20], YRange=[0,20], /NoData, ASPECT=1.0, $  
    YTickLen=1.0, XTickLen=1.0  
cgPolygon, poly[*], poly[*], COLOR='dodger blue', /Fill  
  
cgDisplay, 600, 600, WID=1, Title='Polygon Pixel Fill - PolyFillV'  
testImage = BytArr(20,20)+1B  
pixels = PolyfillV(poly[*], poly[*], 20, 20)  
testImage[pixels]=255  
TVLCT, cgColor('red6', /Triple), 255  
TVLCT, cgColor('white', /Triple), 1  
cgPlot, [1], XRange=[0,20], YRange=[0,20], /NoData, ASPECT=1.0  
cgImage, testImage, XRange=[0,20], YRange=[0,20], /Overplot  
cgPlot, [1], XRange=[0,20], YRange=[0,20], /NoData, ASPECT=1.0, $  
    YTickLen=1.0, XTickLen=1.0, /NoErase  
  
cgDisplay, 600, 600, WID=2, Title='Polygon Interior Pixel Fill -  
IDLanROI'  
p = OBJ_NEW('IDLanROI', poly[*], poly[*])  
mask = p -> ComputeMask(DIMENSIONS=[20,20], MASK_RULE=1)  
pixels = Where(mask EQ 255)  
anImage = BytArr(20,20)+1B  
anImage[pixels] = 255  
cgPlot, [1], XRange=[0,20], YRange=[0,20], /NoData, ASPECT=1.0  
cgImage, anImage, XRange=[0,20], YRange=[0,20], /Overplot  
cgPlot, [1], XRange=[0,20], YRange=[0,20], /NoData, ASPECT=1.0, $  
    YTickLen=1.0, XTickLen=1.0, /NoErase  
  
cgDisplay, 600, 600, WID=3, Title='Polygon All Pixel Fill - IDLanROI'  
p = OBJ_NEW('IDLanROI', poly[*], poly[*])  
mask = p -> ComputeMask(DIMENSIONS=[20,20], MASK_RULE=2)  
pixels = Where(mask EQ 255)  
anImage = BytArr(20,20)+1B
```

```
anImage[pixels] = 255
cgPlot, [1], XRange=[0,20], YRange=[0,20], /NoData, ASPECT=1.0
cgImage, anImage, XRange=[0,20], YRange=[0,20], /Overplot
cgPlot, [1], XRange=[0,20], YRange=[0,20], /NoData, ASPECT=1.0, $
    YTickLen=1.0, XTickLen=1.0, /NoErase
END
;*****
```

With IDLanROI, if you try to take interior pixels, the box is one pixel too short. If you try to take \*all\* the pixels, the box is one pixel too long. It seems impossible to get the box "just right", given a particular polygon description.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

---