
Subject: Colors in 8-bit Z buffer

Posted by [Matthew Argall](#) on Wed, 07 Jan 2015 18:02:46 GMT

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I am wondering there are any tricks to managing the color table in an 8-bit Z buffer. I read "Graphics without Graphics Windows" on the coyote website as well as comments in cgSetColorState. Both indicate why there are problems.

Say I want to create several graphics, each with independent color choices. The last graphic seems to determine how all others will appear. An example is below. I can set the pixel depth to 24 and things work fine. The Pixel depth is 8-bits by default, though, which was making things not working out the way I wanted. Made me curious...

Below is an example.

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How It Should Look

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;Create window and positions

window, /Free, XSize=400, YSize=600

pos = cgLayout([1,3])

;Create data

data1 = cgDemoData(1)

data2 = cgDemoData(13)

data3 = cgDemoData(21)

;Draw plots and images

cgPlot, data1, AXISCOLOR='Grey', POSITION=pos[*,0], TITLE='Time Series', XTITLE='Time (s)', YTITLE='Data', COLOR='Purple'

cglImage, data2, /NOERASE, /AXES, AXKEY={AXISCOLOR: 'Purple'}, POSITION=pos[*,1], TITLE='Hurricane Gilbert', XTITLE='Lat', YTITLE='Lon', CTINDEX=15

cglImage, data3, /NOERASE, /AXES, AXKEY={AXISCOLOR: 'Blue'}, POSITION=pos[*,2], TITLE='Red Blood Cells', XTITLE='Height (um)', YTITLE='Length (um)', CTINDEX=3

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Z Buffer Example

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;Set up the Z Buffer

xsize = 400

ysize = 600

thisDevice = !D.Name

Set_Plot, 'Z'

Device, Get_Pixel_Depth=thisDepth

```

Device, Set_Pixel_Depth=8, Set_Resolution=[xsize, ysize], Z_Buffer=0
cgErase, 'White'

;Create data
data1 = cgDemoData(1)
data2 = cgDemoData(13)
data3 = cgDemoData(21)

;Create window and positions
window, /Free, XSize=xsize, YSize=ysize
pos  = cgLayout([1,3])

;Draw plots and images
cgPlot, data1, AXISCOLOR='Grey', POSITION=pos[*,0], TITLE='Time Series', XTITLE='Time (s)',
YTITLE='Data', COLOR='Purple'
cgImage, data2, /NOERASE, /AXES, AXKEY={AXISCOLOR: 'Purple'}, POSITION=pos[*,1],
TITLE='Hurricane Gilbert', XTITLE='Lat', YTITLE='Lon', CTINDEX=15
cgImage, data3, /NOERASE, /AXES, AXKEY={AXISCOLOR: 'Blue'}, POSITION=pos[*,2],
TITLE='Red Blood Cells', XTITLE='Height (um)', YTITLE='Length (um)', CTINDEX=3

;Save the buffer
img = cgSnapShot()
wDelete, !D.Window

;Reset the device
Device, Set_Pixel_Depth=thisDepth, Z_Buffer=1
Set_Plot, thisDevice

;Display the contents of the buffer
window, /Free, XSize=xsize, YSize=ysize
cgImage, img

```
