
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.

=====

How It Should Look

=====

```
;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'
```

```
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
```

=====

Z Buffer Example

=====

```
;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
```
