
Subject: repeated use of TVRD() gives different results
Posted by [wlandsman](#) on Tue, 11 Oct 2016 18:44:44 GMT
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This is the sort of IDL quirk that I think drove David Fanning into retirement.

The following two lines repeatedly TVRD() the value of a screen pixel

```
IDL> window,0,xsize = 640,ysize=512 ;Create a window
IDL> for i=0,19 do print,tvrd(635,507,1,1,/true) ;Read one pixel
```

On my El Capitan Macbook running IDL V8.5.1 in decomposed mode, I get

```
0 0 0
0 0 0
0 0 0
0 0 0
0 0 0
0 0 0
0 0 0
0 0 0
112 97 46
0 0 8
8 0 0
0 0 14
0 0 0
0 0 0
0 0 0
0 0 0
113 120 46
46 120 113
114 112 47
0 0 14
0 0 14
```

In other words, repeatedly reading the same pixel does not give the same results. (This does *not* happen on my Linux box but only on the Mac.) Coyote graphics reads a corner pixel to decide whether you are using a "traditional" IDL plot (black background), or modern graphics (white background). But after the first call, this test can randomly fail because the result of TVRD() is unpredictable.

(I am mostly weened off of direct graphics, but still need to maintain legacy code.) --Wayne

Current graphics device: X

Server: X11.0, The X.Org Foundation, Release 11704000

Display Depth, Size: 24 bits, (1440,878)

Visual Class: TrueColor (4)

Bits Per RGB: 8 (8/8/8)

Physical Color Map Entries (Emulated / Actual): 256 / 256

Colormap: Shared, 16777216 colors. Translation table: Bypassed
Graphics pixels: Decomposed, Dither Method: Ordered
Write Mask: 16777215 (decimal) fffff (hex)
Graphics Function: 3 (copy)
Current Font: <default>, Current TrueType Font: <default>
Default Backing Store: Req from Server.
Window Status: -----
id typ(x, y, backing store) id typ(x, y, backing store)
0: Win(640, 512, Req from Server)

IDL> !VERSION

```
{  
  "ARCH": "x86_64",  
  "OS": "darwin",  
  "OS_FAMILY": "unix",  
  "OS_NAME": "Mac OS X",  
  "RELEASE": "8.5.1",  
  "BUILD_DATE": "Nov 14 2015",  
  "MEMORY_BITS": 64,  
  "FILE_OFFSET_BITS": 64
```
