Subject: Re: FG-arithmetic error and moving objects
Posted by Dick Jackson on Tue, 03 Mar 2015 16:52:49 GMT
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Hi Helder,

I will bet that Exelis folks are taking notes from this (Hi, Chris!), so I'll add some more to your report.

On Tuesday, 3 March 2015 04:23:57 UTC-8, Helder wrote:
> Hi,
> as already discussed in previous posts, I'm having trouble with annotations on images. I have a minimal example to show three problems.

> Now the problems:
> 1) If I select the circle (blue data) and I try to move it, I can only do that for specific mouse positions. These positions are not consistent with the line. Is this a feature or a bug?
> 2) I cannot move the line at all except if I try to rescale it. Is this a feature or a bug?
> 3) With the above code I get inconsistent math error messages that I cannot pin down to a specific operation. The errors look like:
>
> % Program caused arithmetic error: Floating overflow
> % Program caused arithmetic error: Floating illegal operand
> % Detected at IDLITVISDATASPACE::DRAW 2385 C:\Program Files\Exelis\IDL84\IDL84\lib\itools\framework\idlitvisdatasp ace__define.pro
> [etc.]

Here's my setup (Windows 7, same IDL as you):
```
IDL> help,!version
** Structure !VERSION, 8 tags, length=104, data length=100:
   ARCH            STRING    'x86_64'
   OS              STRING    'Win32'
   OS_FAMILY       STRING    'Windows'
   OS_NAME         STRING    'Microsoft Windows'
   RELEASE         STRING    '8.4'
   BUILD_DATE      STRING    'Sep 27 2014'
   MEMORY_BITS     INT              64
   FILE_OFFSET_BITS
                   INT              64
```

I do see the problems that you describe (but, as Matthew, from the IDLitSymbol object), and further: if I resize the red line, then things change, and we're now in a 3-D world. I can grab the image and end up rotating the whole space around. What is also revealed then is that the red line is no longer on the Z=0 plane. At the command line (I just pasted the lines from your procedure in there), I can do this:

(before resizing red line)
```
IDL> pl.getdata,xx,yy,zz
```

```
IDL> print,xx,yy,zz
      125.00000       375.00000
      125.00000       375.00000
     0.00000000      0.00000000

(after resizing red line)
IDL> pl.getdata,xx,yy,zz
IDL> print,xx,yy,zz
      125.00000       414.00000
      125.00000       180.00000
     0.00000000       1.7147294
```

That's odd, but it explains why we can suddenly rotate the space. And it's then hard to do any of the usual things with the annotations, and that's when I start seeing the arithmetic errors. (It's a good thing Ctrl-Z works at this point to Undo changes... quite dependably, but not perfectly, I find)

And to David: I'm going to guess that what you're seeing is yellow complementary afterimages. (it's all in your head! :-) Since the world is suddenly interested in our visual system this past week, I'll toss out this barely-relevant (but fascinating) link:
https://en.wikipedia.org/wiki/Lilac_chaser

Cheers,
-Dick

Dick Jackson Software Consulting Inc.
Victoria, BC, Canada --- http://www.d-jackson.com
