Subject: A whine about default device settings
Posted by Kenneth P. Bowman on Sat, 09 Feb 2008 21:42:01 GMT
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The new 24-bit Z-buffer device is nice for generating graphics on a device without a display, as is common with servers, for example. It is easier to configure and use than Xvfb, for example.

Unfortunately, some of the default device settings are different between the Z-buffer device and the X-Windows device. (I haven't checked the WIN device because I don't have a Windows machine).

```
IDL> window, xsize=1024, ysize=768
IDL> help, !d, /str
** Structure !DEVICE, 17 tags, length=84, data length=84:
   NAME           STRING    'X'
   X_CH_SIZE      LONG              6
   Y_CH_SIZE      LONG             10
IDL> set_plot, 'z'
IDL> device, set_resolution = [1024, 768], set_pixel_depth = 24
IDL> help, !d, /str
** Structure !DEVICE, 17 tags, length=84, data length=84:
   NAME           STRING    'Z'
   X_CH_SIZE      LONG              8
   Y_CH_SIZE      LONG             12
```

Because IDL scales margins and plot sizes based on the character size, switching devices means that the resulting graphs are not identical, despite identical window/device sizes.

This can be rectified by setting the character size of the Z-buffer device with

```
DEVICE, SET_CHARACTER_SIZE = [6, 10]
```

or doing the reverse for the X-Windows device, but this seems to me to be a pointless and unnecessary device dependence.

I am annoyed enough to post about this because I just spend longer than I should have figuring out why the graphics output from the two devices was not identical.

Ken Bowman

Subject: Re: A whine about default device settings
Posted by Mike[2] on Tue, 12 Feb 2008 15:24:50 GMT

On Feb 11, 1:34 pm, "Kenneth P. Bowman" <k-bow...@null.edu> wrote:
> Oh good, the X, Z, and WIN devices all have different default character
> sizes and pixels per centimeter.

You can't get that sort of consistency without years of development and growth! On the positive side, knowing about this helps immensely - I thought I was just misunderstanding something basic. Which I was, but at least I'm not alone. Reminds me of the rounding errors that change the slopes of plotted lines.

Mike