
Subject: IDL Fonts

Posted by [Jared Espley](#) on Wed, 01 Nov 2006 19:28:28 GMT

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Hi all,

I have a few questions that I haven't been able to answer with some digging around on the web and in the IDL help files so maybe someone can help. The background on my question is that I'm trying to produce a "publication" quality plot using IDL and I intend to either make a .tif from a screen capture using tvread.pro (<http://www.dfanning.com/programs/pswindow.pro>) or a color .eps using postscript output. I'm using IDL 6.2 on Windows XP.

1. Has anyone been able to get True Type fonts (i.e. !p.font=1) to look ok on the screen? When I use them, they look awful -- even worse than the default vector fonts I was trying to improve upon. I've seen some "tricks" about blowing them up 4x times in size, but that's not an option for me since that size of font won't fit on my plot.

2. Has anyone been able to get device fonts (i.e. !p.font=0) to work correctly with vertical axis labels on the screen? When I use them, the labels are just letters stacked on top of each other right-side up. In other words instead of having to turn your head to read them, they look like this:

L
E
B
A
L

3. Assuming I could get the fonts to work correctly, how do I get special symbols? For example, using vector fonts, I would type, "title='!4d!B'" to get little delta B -- how can I do this with the other font styles?

4. How come when I make sure that my plot size is the same on both the output window on my monitor and in the postscript output (by using David Fanning's pswindow.pro <http://www.dfanning.com/programs/pswindow.pro>) then I still have to adjust the positions of my plots, colorbars, etc. to make both outputs look the same?

5. It appears that the color output of the .eps file I make has very discrete color levels (about 10 or so) compared to the fairly smooth continuum I see when I output to a window on the screen. Is this a fundamental limit of postscript or am I doing something wrong?

Thanks for any help and to all of you that have posted helpful IDL code on the web.

Jared

Subject: Re: IDL Fonts

Posted by [David Fanning](#) on Thu, 02 Nov 2006 15:33:25 GMT

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David Fanning writes:

```
> Well, I am using the same Windows XP and IDL 6.2 system you
> are, and I find that unicode 22A5 is for a box! The perpendicular
> line is listed as unicode 007C. This code worked for me.
>
> device, set_font='Times New Roman', /tt_font
> thisDevice = !D.Name
> set_plot, 'ps'
> device, xsize=5, ysize=1, /inches, filename='test.ps', /isolatin1
> xyouts, 0.5, 0.5, /normal, charsize=2, align=0.5, $
>   'Straight bar (!Z(007C)) sign.'
> device, /close
> set_plot, thisDevice
```

Whoops! That XYOutS command needs a FONT=1 keyword on the end of it! Sorry.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: IDL Fonts

Posted by [Jared Espley](#) on Thu, 02 Nov 2006 16:35:39 GMT

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David Fanning wrote:

```
> Well, I am using the same Windows XP and IDL 6.2 system you
> are, and I find that unicode 22A5 is for a box! The perpendicular
> line is listed as unicode 007C.
```

At risk of being unduly argumentative, I don't think 22A5 is supposed to be a box. I got that code from here:
<http://www.unicode.org/charts/PDF/U2200.pdf> You'll see which perpendicular symbol I'm trying to achieve there. Also, if you use, for example, 22A6 you also get a box when using the XP device fonts.

Thus, I stick by my assertion that many of the XP device fonts don't have the full unicode implementation and thus are less useful for specific tasks. Fortunately, as I noted I was able to get something satisfactory with vector fonts.

As usual, thanks for your time.

Jared

Subject: Re: IDL Fonts

Posted by [David Fanning](#) on Thu, 02 Nov 2006 16:49:56 GMT

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Jared Espley writes:

> At risk of being unduly argumentative, I don't think 22A5 is supposed
> to be a box. I got that code from here:
> <http://www.unicode.org/charts/PDF/U2200.pdf> You'll see which
> perpendicular symbol I'm trying to achieve there. Also, if you use,
> for example, 22A6 you also get a box when using the XP device fonts.

I think you need to read the first page of PDF file you cite, under the topic of "Fonts". They point out that their chart is "not prescriptive. Considerable variation is to be expected in actual fonts."

To get the actual Unicode values for a *particular* font, you have to know something about that font. In the case I presented, I used the Character Map application for the Times New Roman font. There, 22A5 is *definitely* a box. :-)

> Thus, I stick by my assertion that many of the XP device fonts don't
> have the full unicode implementation and thus are less useful for
> specific tasks.

I'm not saying this isn't true. I'm just saying that I found the perpendicular line in the font I use day in and day out to have a Unicode value of 007C, and when I used it like that it worked perfectly. What font were you trying to use?

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: IDL Fonts

Posted by [David Fanning](#) on Thu, 02 Nov 2006 17:24:02 GMT

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Jared Espley writes:

- > At risk of being unduly argumentative, I don't think 22A5 is supposed
- > to be a box. I got that code from here:
- > <http://www.unicode.org/charts/PDF/U2200.pdf> You'll see which
- > perpendicular symbol I'm trying to achieve there. Also, if you use,
- > for example, 22A6 you also get a box when using the XP device fonts.

It is hard to know what that chart means. For example, if you look on page two of the document (the actual chart), you find that a vertical bar has a Unicode value of 2223 (not 22A5, which I read as a "flagpole" or something). But if you look on the next page, under Operators, you see 2223, and indented the value 007C for a "vertical line".

I have no idea what any of this means! I do notice that I can get a vertical bar in my display text if I use !z(2223) but it appears as a box in PostScript! To get the vertical bar in PostScript I have to use !z(007c).

Too weird...

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: IDL Fonts

Posted by [K. Bowman](#) on Thu, 02 Nov 2006 17:58:49 GMT

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In article <MPG.1fb3d78cbddf33a9989d8c@news.frii.com>,
David Fanning <news@dfanning.com> wrote:

- > I have no idea what any of this means! I do notice
- > that I can get a vertical bar in my display text
- > if I use !z(2223) but it appears as a box in PostScript!
- > To get the vertical bar in PostScript I have to use
- > !z(007c).
- >
- > Too weird...

I think the box is the default postscript symbol for "You asked me to display something here that I don't understand".

Ken Bowman

Subject: Re: IDL Fonts

Posted by [Jared Espley](#) on Thu, 02 Nov 2006 18:16:49 GMT

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David Fanning wrote:

- > It is hard to know what that chart means. For example, if
- > you look on page two of the document (the actual chart),
- > you find that a vertical bar has a Unicode value of 2223
- > (not 22A5, which I read as a "flagpole" or something).

Yeah, it's actually that flagpole symbol (a straight vertical line with a straight horizontal line at the bottom) that I'm going for and not the vertical "pipe" (e.g. |). In my field, it's often used as a subscript to indicate the perpendicular components of a vector relative to some background direction. That fact is largely irrelevant since our discussion had progressed from the specific to the general.

In the end, I think we're saying the same thing -- knowing the unicode number isn't sufficient. You also have to know something about how the particular font and its precise unicode implementation. If you're feeling energetic you may consider appending something like that to your discussion at http://dfanning.com/graphics_tips/lesign.html. Again, many kudos to you for even having such a help page in the first place. One would have hoped that RSI could have provided sufficient documentation.

Jared

Jared

Subject: Re: IDL Fonts

Posted by [Jared Espley](#) on Thu, 02 Nov 2006 18:16:57 GMT

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David Fanning wrote:

- > It is hard to know what that chart means. For example, if
- > you look on page two of the document (the actual chart),
- > you find that a vertical bar has a Unicode value of 2223
- > (not 22A5, which I read as a "flagpole" or something).

Yeah, it's actually that flagpole symbol (a straight vertical line with a straight horizontal line at the bottom) that I'm going for and not the vertical "pipe" (e.g. |). In my field, it's often used as a subscript to indicate the perpendicular components of a vector relative to some background direction. That fact is largely irrelevant since our discussion had progressed from the specific to the general.

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Jared

Subject: Re: IDL Fonts

Posted by [David Fanning](#) on Thu, 02 Nov 2006 18:34:20 GMT

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Jared Espley writes:

- > In the end, I think we're saying the same thing -- knowing the unicode
- > number isn't sufficient. You also have to know something about how the
- > particular font and its precise unicode implementation.

Ah, yes, I see what you mean. I believe you are right.

I've thought about adding this whole discussion to the article. Just so people can see how confusing all of this can be! :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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