Subject: Re: Different Platforms
Posted by mgs on Wed, 19 Nov 1997 08:00:00 GMT
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In article <3473138C.B39FFA08@ssec.wisc.edu>, Liam Gumley
<Liam.Gumley@ssec.wisc.edu> wrote:

> Neil Winrow wrote:
>
>> I have written a number of widget programs, which are visually correct
>> on my PC, however when they are run on the silicon graphics machines the
...
> (1) If your development platform is a PC, then make sure that once a day
> you test the program on a Unix box, and a Mac. Unless you do this, it is
> easy in your program design to go down a path from which there is no
> return.
>
> (2) As David Fanning suggested, having the commands
>
> Device, Set_Character_Size = [6, 9]
> Widget_Control, Default_Font = '7x13'
>
> in your IDL startup file will guarantee consistent graphics font and widget
> font sizes on all *Unix* platforms. However, these commands are ignored on
> PCs. You should try David's STR_SIZE program.
>
> (3) You may wish to look into using *hardware* fonts for graphics. I've
> been experimenting with them in Unix, and getting pretty good results. You
> can see the list of available hardware fonts in IDL by using the command
>
...
> The major drawback to using hardware fonts is that they do not rotate
> automatically, e.g.
>
> plot, indgen(10), xtitle = 'X AXIS', ytitle = 'Y AXIS'
>
> when using hardware fonts will give you the Y title plotted vertically, but
> not rotated. You can get around this by creating the Y axis title in a
> pixmap, reading an array of byte data from the pixmap, rotating the array
> using ROTATE, and TVing the rotated array next to your Y axis. This takes a
> bit of messing around, but the resulting graphics plots look *much* more
> professional than the default vector fonts.

And I thought I had a lot of patience for dealing with interface problems.

> (4) When creating widget programs, be very careful about using XSIZE and
> YSIZE keywords. I try to use them only for WIDGET_DRAW, WIDGET_LABEL, and
> WIDGET_BUTTON sizing.

>
> (5) Rely on the ROW, COLUMN, and alignment keywords when creating widget
> bases to position your widgets.

I tried staying away from [XY]Size for a long time. Now I find that it's
the only way to get a decent cross-platform look. I only rely on the
XSize, I don't think I've used YSize anywhere. Everything I use has Row
and Column keywords. As I mentioned earlier in this thread, I rely on the
Widget_Info(widget_id, /Geometry) call and my own widget size structure to
provide the info I need to get correctly sized widgets. The following URL
shows a very busy interface http://ww2.sd.cybernex.net/~mgs/IV_IAS_BB.html
with Mac and UNIX versions side by side. Well, it's the same except for an
overlapping hierarchy near the botton has been toggled. I haven't updated
the images in months and there has been a lot of development since then.
Maybe it's time to do that for both platforms and add in some additional
info about making the stuff work correctly.

> PS I've attached a Unix hardware font selection routine below - I'll be
> modifying it soon to work on PC and Mac.

Well, here's a version that runs on Mac and UNIX. It was tested a couple
years ago on a PC, but hasn't been run on a PC since. It could be extended
to include italics and additional sizes without too much of a headache.

Usage: Font_Struct = FontGen()

```
 ;############################################################## ################
; Author: Mike Schienle
; $Workfile:   fontgen.pro  $
; $Revision:   1.1  $
; Orig Date:  96-12-17
; $Modtime:   Wed Oct 01 10:26:18 1997  $
 ;############################################################## ################

FUNCTION FontGen, PROP=prop, MONO=mono, SYMBOL=symbol
   IF (N_Elements(prop) EQ 0L) THEN $
      prop = 'times'

   IF (N_Elements(mono) EQ 0L) THEN $
      mono = 'courier'

   IF (N_Elements(symbol) EQ 0L) THEN $
      symbol = 'symbol'

   ;   get Operating System info
   IF (!Version.OS_Family EQ 'unix') THEN BEGIN
      ;   We're using UNIX
      ;   specify the names of proportional and monospace fonts
```

```
    asFontName = ['-*-' + prop + '-', $
       '-*-' + mono + '-', $
       '-*-' + symbol + '-']
    ;   specify font weights
    asFontWeight = ['medium-', 'bold-']
    ;   specify "extras" - string completers
    asFontExtra = ['r-*-*-', '-*']
ENDIF ELSE BEGIN
    ;   Non-UNIX (Mac, Windows)
    ;   specify the names of proportional and monospace fonts
    asFontName = [prop + '*', mono + '*', symbol + '*']
    ;   specify font weights
    asFontWeight = ['', 'bold*']
    ;   specify "extras" - string completers
    asFontExtra = ['', '']
ENDELSE

;   font strings
;   UNIX style
;   -adobe-times-medium-r-normal--12-120-75-75-p-64-iso8859-1
;   Mac/PC Style
;   times*bold*18, times*18

;   font sizes
asFontSize = ['10', '12', '18', '24']
;   abbreviated font wieghts
asFontWAbbr = ['m', 'b']

;   create a structure of font names, proportional and monospace
sCmdFont = 'mFont = {'
FOR fs = 0, (n_elements(asFontSize) - 1) DO $
    FOR fw = 0, (n_elements(asFontWeight) - 1) DO $
        sCmdFont = sCmdFont + $
            'prop' + asFontSize(fs) + asFontWAbbr(fw) + ':"' + $
            asFontName(0) + asFontWeight(fw) + asFontExtra(0) + $
            asFontSize(fs) + asFontExtra(1) + '", ' + $
            'mono' + asFontSize(fs) + asFontWAbbr(fw) + ':"' + $
            asFontName(1) + asFontWeight(fw) + asFontExtra(0) + $
            asFontSize(fs) + asFontExtra(1) + '", ' + $
            'symbol' + asFontSize(fs) + asFontWAbbr(fw) + ':"' + $
            asFontName(2) + asFontWeight(fw) + asFontExtra(0) + $
            asFontSize(fs) + asFontExtra(1) + '", '

sCmdFont = StrMid(sCmdFont, 0, StrLen(sCmdFont) - 2) + '}'
;   example follows - Mac/PC version
;   mFont = {prop10m:"times*10", mono10m:"courier*10", $
;   prop10b:"times*bold*10", mono10b:"courier*bold*10", $
;   ...
```

```
    ;   prop24m:"times*24", mono24m:"courier*24", $
    ;   prop24b:"times*bold*24", mono24b:"courier*bold*24"}

    status = Execute(sCmdFont)

    ;   return the font structure
    Return, mFont
END
```

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Mike Schienle Interactive Visuals
mgs@sd.cybernex.net http://ww2.sd.cybernex.net/~mgs/