
Subject: Re: [Q]Finding Screen Resolution in IDL
Posted by [Peter Mason](#) on Wed, 28 Aug 1996 07:00:00 GMT
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On Wed, 28 Aug 1996, Tim Patterson wrote:

> I have a large IDL widget application that creates a number
> of windows of varying sizes. The problem is that some of
> the machines it runs on have differing screen resolutions
> i.e. 100 dpi vs 75 dpi. If I use a 14 point font, it looks fine
> on the 100dpi screen, but too large on the 75dpi screen
> (the windows are too large and therefore hard to work with
> when there are a number open). But if I use, say, a 10point
> font, the windows look greta on the lower resolution screen, but
> unreadable on the high resolution one.
>
> So, is there a way to test which resolution screen I'm on and
> set the font point-size accordingly (perhaps something using
> the size of the screen in pixels which I can get via IDL).

I'm not sure that you can do this sort of thing reliably. My personal view is that it's far easier to provide the facility for the user to select the font of his/her choice.

Here are some ideas anyway...

You can get the screen resolution with `DEVICE,GET_SCREEN_SIZ=screen_xy` (size in pixels) and `!D.X_PX_CM`, `!D.Y_PX_CM` (screen pixels per cm). For the character size use `!D.X_CH_SIZE` and `!D.Y_CH_SIZE` (pixels wide & high).

Well, this is the idea anyway. I'm not sure how accurate the `_PX_CM` values are, and obviously the `_CH_SIZE` fields are some sort of approximation when variable-character-width fonts are used. If you have a representative string of characters handy, you might get a better idea of width by rendering the string and checking its width, e.g.,
`XYOUTS,0,0,char_string,/norm,charsiz=-1,width=string_width,font=0`
(Then convert the width from "norm" to pixels according to your window size.)

This all assumes that the widget and device "systems" are using the same font, and that you can make a rough guess at the sort of overhead incurred in the widget system (spacing, padding etc). (I think the latter might be difficult.)

e.g., to set the font (in Windows) to "courier new*10", use

`DEVICE,FONT='courier new*10' & WIDGET_CONTROL,DEFAULT_FONT='courier new*10'`

Peter Mason

Subject: Re: [Q]Finding Screen Resolution in IDL
Posted by [David Foster](#) on Thu, 29 Aug 1996 07:00:00 GMT
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Tim Patterson wrote:

>
> So, is there a way to test which resolution screen I'm on and
> set the font point-size accordingly (perhaps something using
> the size of the screen in pixels which I can get via IDL).
>

Check out the documentation for the !D graphics system variable.
The fields X_VSIZE, Y_VSIZE give the size of the visible area of
the display; X_CH_SIZE and Y_CH_SIZE give the normal width and height of
a character in device units. X_PX_CM and Y_PX_CM give the approximate
number of pixels per cm in X and Y direction.

Hope this helps.

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