Subject: Re: Translate characters/string size to data/normal coordinates?
Posted by David Fanning on Thu, 29 Jul 2004 16:01:58 GMT
View Forum Message <> Reply to Message

J.K. writes:

> Is there any way to know the position of characters written to a
> device with xyouts? I'd like to do an xyouts but clear anything
> drawn underneath the text first with a polyfill.
>
> I can do it by trial and error but I could generalize it if I could
> translate characters to width and height in data or normal coordinates.
> I suppose this would change with !p.charsize/charsize/font selection.
>
> Any ideas?

This tickled some ideas I've had lately about writing an
annotation object. (Although I despair of ever having decent
fonts to work with in direct graphics.) Here is a quick and
dirty test program I built in a few minutes this morning.
It at least gives me some hope. :-)

Cheers,

David

```
;************************************************************ ***
PRO TestWidth

Window, XSize=400, YSize=400

!P.Charsize = 1.0
xyouts, 0.5, 0.5, alignment=0.5, 'This is a text string', /normal,
width=w & print, w
skosh = 4.0/!D.Y_Size * !P.Charsize
x1 = 0.5 - w/2
x2 = 0.5 + w/2
y1 = 0.5 - skosh
y2 = 0.5 + (!P.Charsize * !D.Y_CH_SIZE / !D.Y_Size)
plots, [x1, x1, x2, x2, x1], [y1, y2, y2, y1, y1], /Normal

!P.Charsize = 2.0
xyouts, 0.5, 0.25, alignment=0.5, 'This is a text string', /normal,
width=w & print, w
skosh = 4.0/!D.Y_Size * !P.Charsize
x1 = 0.5 - w/2
x2 = 0.5 + w/2
y1 = 0.25 - skosh
```

```
y2 = 0.25 + (!P.Charsize * !D.Y_CH_SIZE / !D.Y_Size)
plots, [x1, x1, x2, x2, x1], [y1, y2, y2, y1, y1], /Normal

!P.Charsize = 3.0
xyouts, 0.5, 0.75, alignment=0.5, 'This is a text string', /normal,
width=w & print, w
skosh = 4.0/!D.Y_Size * !P.Charsize
x1 = 0.5 - w/2
x2 = 0.5 + w/2
y1 = 0.75 - skosh
y2 = 0.75 + (!P.Charsize * !D.Y_CH_SIZE / !D.Y_Size)
plots, [x1, x1, x2, x2, x1], [y1, y2, y2, y1, y1], /Normal

END
 ;********************************************************** ***
```

That hardcoded "4" in the skosh variable should probably be
something like this: Round(!D.Y_CH_SIZE * 0.4). It's purpose
is to account for descenders.

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Translate characters/string size to data/normal coordinates?
Posted by R.Bauer on Sun, 01 Aug 2004 16:33:49 GMT
View Forum Message <> Reply to Message

J.K. wrote:
> Is there any way to know the position of characters written to a
> device with xyouts? I'd like to do an xyouts but clear anything
> drawn underneath the text first with a polyfill.
>
> I can do it by trial and error but I could generalize it if I could
> translate characters to width and height in data or normal coordinates.
> I suppose this would change with !p.charsize/charsize/font selection.
>
> Any ideas?
>
> Thanks,
> John K.

You could use the widths keyword of xyouts. First write the word outside
of the plot.

You could also have a look in our xyouts_box routine
http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_source/idl _html/dbase/xyouts_box_dbase.pro.html

This routine did already the job you described.

```
tek_color
PLOT, findgen(10)
x=RANDOMU(1, 1000)*10 & y=randomu(2, 1000)*10
OPLOT, x,y, psym=1
OPLOT, findgen(10)-0.5 & oplot, findgen(10)-0.6
xyouts_box, 1, 1, 'test 11', /DATA $
          , textcolor=2,  boxcolor= 3 $
          , charsize=3
```

Please have a look for further routines into

http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_lib_intro. html

cheers

Reimar

Subject: Re: Translate characters/string size to data/normal coordinates?
Posted by andrew.cool on Mon, 02 Aug 2004 00:41:45 GMT
View Forum Message <> Reply to Message

ellips@yahoo.com (J.K.) wrote in message
news:<90c173a.0407290707.65405a8@posting.google.com>...
> Is there any way to know the position of characters written to a
> device with xyouts? I'd like to do an xyouts but clear anything
> drawn underneath the text first with a polyfill.
>
> I can do it by trial and error but I could generalize it if I could
> translate characters to width and height in data or normal coordinates.
> I suppose this would change with !p.charsize/charsize/font selection.
>
> Any ideas?
>
> Thanks,
> John K.

Hi John,

Try using a negative value with the CHARSIZE keyword, which will

1. Not write anyhting to the screen, and

2. Return in the Width keyword the width of the string in
   normalised coordinates.

e.g. :-

```
 string = 'This is a normal string'
 XYOUTS, x, y, string, WIDTH=thisWidth, CHARSIZE=-1
```

Of course, Charsize = -2 gives you a string twice as wide.

See http://www.dfanning.com/tips/stringsize.html for more info.

Cheers,

Andrew Cool
DSTO, Adelaide, South Australia
