Subject: Re: Vertical text alignment in postscript
Posted by Vince Hradil on Tue, 17 Jul 2007 16:38:24 GMT
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On Jul 17, 4:59 am, Andy Heaps <a.j.he...@reading.ac.uk> wrote:
> I'm trying to align text vertically in postscript but have some extra
> space
> above where the text finishes.Using !D.Y_CH_SIZE/2.0 as the mid-point
> means that the text is now not vertically aligned.
>
> Has anyone an explanation/solution for this problem?
> Attached is a small program to show the problem.
>
>   Many thanks
>   Andy
>
> PRO ll
>
> SET_PLOT, 'ps'
> DEVICE, FILE='ll.ps', XSIZE=8.27, YSIZE=11.69, $
>   XOFFSET=0.5, YOFFSET=0.5, /INCHES, /COLOR
> !P.COLOR=1
> !P.FONT=0
> !P.POSITION=[0.1,0.3,0.9,0.6]
> r = [255,0]
> g = [255,0]
> b = [255,0]
> TVLCT,r,g,b
>
> mysize=6.0   ;Size of our text
> ypix=!D.Y_CH_SIZE*mysize   ;Height of text in pixels
> xstart=1000   ;X start of plotting
> xfinish=20000   ;X finish of plotting
> ystart=5000   ;Y start of plotting
>
> XYOUTS, xstart, ystart, CHARSIZE=mysize, 'Testing 123', /DEVICE
> PLOTS, [xstart, xfinish], [ystart, ystart], /DEVICE ;Bottom of text
> PLOTS, [xstart, xfinish], [ystart+ypix, ystart+ypix], /DEVICE ;Top of text
>
> DEVICE, /CLOSE
>
> END

The !d.y_ch_size is not the _exact_ text height:

X_CH_SIZE
Y_CH_SIZE
The width and height of the rectangle that encloses the "average"

character in the current font, in device units (usually pixels). These values describe the size of the rectangle that contains the "average" character in the current font. (It is not important what the "average" character is; it is used only to calculate a scaling factor that will be applied to all of the characters in the font.) The first element specifies the width of the rectangle in device units (usually pixels), and the second element specifies the height.

For vector and TrueType fonts, the height of the "average" character is determined by the width of the rectangle. The aspect ratio of the "average" character remains fixed; the character is scaled so that its width is the value of X_CH_SIZE. The resulting scale factor is then applied to all of the characters in the font. The amount of spacing between lines is determined explicitly by the value of Y_CH_SIZE. For device fonts, the character size is fixed. When the device font system is in use, the value of X_CH_SIZE is silently ignored, and only the Y_CH_SIZE value is used.