Subject: Re: Reversal of z axis object
Posted by davidf on Sun, 01 Aug 1999 07:00:00 GMT
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David Fanning (davidf@dfanning.com) writes:

> Waleed Al-Nuaimy (asger@gsiukltd.freeserve.co.uk) writes:
>
>> Hi. I'm trying to get my Z axis object to point downwards, i.e. have 0
>> at the top and
>> numbers increasing down the axis.
>>
>> Using a negative ZCOORD_CONV reverses the numbers but also gives me
>> mirror-image characters. Reversing the TickValues doesn't work either?
>
> I'm not absolutely sure about this, but somehow I vaguely
> recall that this was a problem that was suppose to get fixed.
> I'd check with RSI on this one.

I was just working through my Tips database, looking for tips
to put on my web page, and I came across this article posted
earlier this year by Mark Hadfield. Might be exactly what you
are looking for.

Cheers,

David

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Subject: Re: Reversing an axis with IDLgrAxis
From: "Mark Hadfield" <m.hadfield@niwa.cri.nz>
Date: Tue, 2 Feb 1999 15:08:04 +1300

> OK, I give. I would like to plot an axis (object graphics) with values
> descending rather than ascending in the normal positive direction. I can do
> this using (XY)COORD_CONV, but when I do, the tick text and axis title are
> reversed as well (mirror image) and I can't figure out how to reverse them
> back to read normally.

Plot against the inverse of the variable and get the labels you want via
the TICKFORMAT property. The TICKFORMAT_NEGATIVE function below
is designed to do this.

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National Institute for Water and Atmospheric Research
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******************************
;+
; NAME:
;   TICKFORMAT_NEGATIVE
;
; PURPOSE:
;   This function is designed for use with the TICKFORMAT property of
IDLgrAxis.
;   Given a real value, it returns a string representing the inverse of that
value.
;
; CATEGORY:
;   Miscellaneous
;   Object graphics
;
; CALLING SEQUENCE:
;   Result = FUNCTION_NAME(Direction, Index, Value)
;
; INPUTS:
;   Direction:  Axis direction, required by the TICKFORMAT interface but
ignored.
;
;   Index:      Axis index, required by the TICKFORMAT interface but
ignored.
;
;   Value:      The real value to be formatted.
;
; OUTPUTS:
;   The function returns a scalar string.
;
; EXPLANATION:
;   IDLgrAxis objects always have the values increasing from left to right.
;   The axis can be reversed, but then the axis labels are seen from behind!
;   So to get an axis with values decreasing from left to right, we have to
;   plot the inverse of the variable and reformat the axis labels.
;
; TO DO:
;   Allow format control via the DATA keyword.
;
; MODIFICATION HISTORY:
;   Mark Hadfield, Jun 1998:
;       Written.
;-

function TICKFORMAT_NEGATIVE, Direction, Index, Value

    return, (format_axis_values(-Value))[0]
```

end

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