Subject: Re: !p.multi and tv
Posted by pit on Fri, 29 May 1998 07:00:00 GMT
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In article <6kkn02$h39$1@nnrp1.dejanews.com>,
csaute3@alumni.umbc.edu writes:
> In article <6jp3cljus3@gwdu19.gwdg.de>,
> pit@uni-sw.gwdg.de wrote:

>> PRO Tvimg, image, xax, yax, position=pos, box=box, noerase=noerase, $
>> nolabels=nolabels, noscale=noscale, ASPECT=aspect, _EXTRA=extra
> [...]
>
> Tvimg.pro uses a function called "rescale". This is not an IDL function.
> Is this a routine that you wrote?

Yes - I overlooked it while scanning for unresolved routines - sorry:

Peter

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------------------------
FUNCTION Rescale, image, xsize, ysize, scale=scale
;+
; NAME:
;       RESCALE
; PURPOSE:
;       Expand or shrink a given (1- or 2-dimensional) Array to new size
; CATEGORY:
;
; CALLING SEQUENCE:
;       RESULT = RESCALE( IMAGE, [[ XSIZE [, YSIZE]] || SCALE=Scale] )
; INPUTS:
;       IMAGE : Original Image
;       XSIZE : New dimension for the X-axis
;       YSIZE : 1-d case: If ysize is given, a pseudo-2d Array of
;               identical rows is returned, else a 1-dim Array of size
;               xsize .
;               2-d case: If ysize is given it is taken as the new
;               dimension for the Y-axis. If omitted, the Y-axis is
;               scaled with the same factor as the X-axis to keep the
;               aspect ratio
; KEYWORDS:
;       SCALE : (input) 1- or 2-element vector with the scales for x
;               and y axis. Overrides YSIZE and YSIZE.
; OUTPUTS:
;       RESULT: Rescaled array of same type as IMAGE, size is
;               (XSIZE,YSIZE)                (1/2-d case, YSIZE given)
;               (XSIZE,YOrig*XOrig/XSIZE)    (2-d case, YSIZE omitted)
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;             (XSIZE)                    (1-d case, YSIZE omitted)
; PROCEDURE:
;      Scale-Factors are computed from the Size of the original data
;      and the parameters XSIZE and YSIZE. For 1-dim case SPLINE is
;      used for interpolation, in 2-d case POLY_2D is used.
; MODIFICATION HISTORY:
;      19-Feb-1993  P.Suetterlin, KIS
;-

on_error, 2                              ; Return on error

IF n_params() LT 2 AND NOT keyword_set(scale) THEN BEGIN
   message, 'Usage:  result = rescale( Image, XSize [, YSize] )'
ENDIF

s=size(image)
IF s(s(0)+1) EQ 8 THEN BEGIN    ; Image is ST4-Structure?
   pic = image.pic            ; Only for my personal
                         ; use
   s = size(pic)
ENDIF ELSE pic = image

IF keyword_set(scale) THEN BEGIN
   IF n_elements(scale) EQ 1 THEN scale = [scale, scale]
     ;;; scale overrides xsize/ysize
   xsize = s(1)*scale(0)
   IF s(0) NE 1 THEN ysize = s(2)*scale(1)
ENDIF

IF s(0) EQ 1 THEN BEGIN                  ; Image is 1-d Array
   line = spline(indgen(s(1)), pic, $
              findgen(xsize)/xsize*s(1))
   IF n_params() EQ 3 THEN BEGIN           ; Expand to 2-dim
      scalepic = fltarr(xsize, ysize)
      FOR i = 0, ysize-1 DO scalepic(*, i) = line
      return, scalepic                   ; Return 2-dim
   ENDIF ELSE return, line                ; Return 1-dim
ENDIF ELSE BEGIN
   IF n_params() LT 3 AND NOT keyword_set(scale) THEN  $  ; Rescale Y by same
     ysize = fix(s(2)*(float(xsize)/s(0))+.5)           ; amount
   P = [[0, 0], [float(s(1))/xsize, 0]]     ; Matrices for
   Q = [[0, float(s(2))/ysize], [0, 0]]     ; Poly_2d
   return, poly_2d(pic, P, Q, 1, xsize, ysize)
ENDELSE
END
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-- * -- * ...-- * -- * ...-- * -- * ...-- * -- * ...-- * -- * ...-- * --
Come and see the stars! http://www.kis.uni-freiburg.de/~ps/SFB
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