Subject: problems with XInterAnimate
Posted by Martin Schultz on Wed, 28 Jan 1998 08:00:00 GMT
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Hi again,

this time I am on the questioning side again: When I run the attached program on our IBM 39H with AIX 4.1, I receive the error message

% X windows protocol error: BadDrawable (invalid Pixmap or Window parameter).

right at the very end, i.e. all the pixmaps have been created and loaded into XInterAnimate, and the animator window already appears on the screen. However, no image is displayed, and IDL does not react to any keystroke or mouseclick any more (except Ctrl-Z after which I have to kill it).

At some point the program *did* work and went smoothly through the animation. I haven't tried rebooting the terminal yet, I will tell you later if this helped. Note for David: I am using your TVimage, but I doubt that this could cause the trouble.

If anyone has experience with this error message, please let me know.

Regards,
Martin.

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;---------- --
;+
; NAME:
;       SAT_TRAJEC2
;
; PURPOSE:
;       overlay flight track of aircraft and few backtrajectories
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;       and loop through satellite images to detect cloud encounter
;       (built for LNOX/PNOX analysis of PEM-Tropics)
;       VERSION with 1/2 day time interval and IR images
;
; CATEGORY:
;       data analysis
;
; CALLING SEQUENCE:
;       SAT_TRAJEC2 [,keywords]
;
; INPUTS:
;       FLIGHTDATA --> array with the merged data for the selected flight
;            or all flights. Must be accompanied with FLIGHTHEADER
;            parameter. If this parameter contains less than 2 elements,
;            the file ~mgs/terra/chem1d/INPUT/allnmhc.data is read.
;
;       FLIGHTHEADER --> vector with variable names of FLIGHTDATA. Must
;            contain the following entries: FLIGHT, LON, LAT, ALTP, PSMB,
;            and JDAY
;
;       TRAJDATA --> trajetory data for this case. This is a structure
;            containing the fields LON, LAT, TIME, ALT, and FLAG as
;            returned by READ_TRAJ.PRO. Don't worry about it, simply
;            pass a named variable (so it won't have to be read every
;            time) and use the /LOADNEW keyword if you move to another day.
;
; KEYWORD PARAMETERS:
;       FLIGHTNO --> flight number to be analyzed
;
;       LON, LAT, ALT --> geographic location of point to be analyzed
;
;       /LOADNEW --> set thiskeyword to force reading of new trajectory
;            data. (sure: the program could keep track of day changes,
;            but I want to get some sleep as well ;-)
;
; OUTPUTS:
;       plots a satellite image and overlays flight TRAJEC of
;       aircraft
;
; SUBROUTINES:
;
; REQUIREMENTS:
;       uses procedure MAP_IMAGE
;
; NOTES:
;
; EXAMPLE:
;
```

```
; MODIFICATION HISTORY:
;       mgs, 28 Jan 1998: VERSION 1.00
;
;-
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; be used commercially or sold as part of a larger package,
; please contact the author to arrange payment.
; Bugs and comments should be directed to mgs@io.harvard.edu
; with subject "IDL routine sat_trajec"
 ;------------------------------------------------------------ --


pro sat_trajec2,flightdata,header,trajdata,flightno=flightno,  $
         lon=lon,lat=lat,alt=alt,loadnew=loadnew



; program requires FLIGHTNO, LON, LAT, and ALT
   if (n_elements(flightno) le 0 OR n_elements(LON) le 0 $
       OR n_elements(LON) le 0 OR n_elements(LON) le 0) then $
       message,'SAT_TRAJEC: requires FLIGHTNO, LON, LAT, and ALT keywords.'

; parse parameters, set defaults
   if (n_elements(waittime) le 0) then waittime = 2.

; if flightdata is not passed, read it now
   if(n_elements(flightdata) lt 2) then $
        readdata,'~/terra/chem1d/INPUT/allnmhc.data',flightdata,head er, $
              delim=' ',skp1=1,skp2=3

; if trajdata is not passed, read it now, else extract from structure
   if(n_elements(trajdata) le 0 OR keyword_set(loadnew)) then begin
       read_traj,'/data/pem-t/traj_dc8/fs101d'+  $
                string(flightno,format='(i2.2)')+ $
                '.pmt',ttime,tlon,tlat,talt,flag=flag
       trajdata = { time:ttime, lon:tlon, lat:tlat, alt:talt, flag:flag }
   endif else begin
       ; check if trajdata is valid structure
       test = size(trajdata)
       if (test(test(0)+1) ne 8) then begin
          print,'trajdata is not a valid structure.'
          stop
       endif

       ttime = trajdata.time
```

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      tlon = trajdata.lon
      tlat = trajdata.lat
      talt = trajdata.alt
      flag = trajdata.flag
   endelse



; extract position variables from aircraft data set

   aflight = flightdata(where(header eq 'FLIGHT'),*)
   aday = flightdata(where(header eq 'JDAY'),*)
   alon = flightdata(where(header eq 'LON'),*)
   alat = flightdata(where(header eq 'LAT'),*)
   aalt = flightdata(where(header eq 'ALTP'),*)
   apsmb = flightdata(where(header eq 'PSMB'),*)

   aind = where(aflight eq flightno)
   if (aind(0) lt 0) then $
      message,'Invalid FLIGHTNO !'

   ; extract day of flight
   jday = aday(aind(0))

   ; retrieve (mean) pressure level for altitude
   tmp = aalt(aind)
   ind = where(abs(alt-tmp) lt 0.15)
   if (ind(0) lt 0) then begin
     print,'cannot find pressure for altitude ',alt
     stop
   endif
   meanp = apsmb(aind)
   meanp = total(meanp(ind))/float(n_elements(ind))


; look for trajectory starting points near case under investigation
   tlon0 = tlon(0,*)
   tlat0 = tlat(0,*)
   talt0 = talt(0,*)
   tind = where(abs(lon-tlon0) lt 2. AND abs(lat-tlat0) lt 2. $
               AND abs(meanp-talt0) lt 50.)

   print,' Selected ',n_elements(tind)*(tind(0) ge 0),' trajectories.'
   if (tind(0) lt 0) then begin
     print,'Cannot find suitable trajectories.'
     stop
   endif
```

```
    ttime = ttime(*,tind)
    tlon = tlon(*,tind)
    tlat = tlat(*,tind)
    talt = talt(*,tind)
    flag = flag(*,tind)


; load color table grey scale and change first 20 colors
    myct,0         ; load grey scale color table
;   gamma_ct,1.6     ; enhance contrast


; open graphics window of nice size
    window,0,xsize=900,ysize=850

; set up animation
    XInterAnimate,set=[900,850,11],/cycle,/track, $
          title='Trajectory cloud chasing'

; loop through satellite images and plot composite image
; use only 1 daily visible image for now

    for i=0,9 do begin
       sday = string(jday-(i+1)/2,format='(i3.3)')
       stime = '1500'
       if (fix(i/2.) eq i/2.) then stime = '0300'
       satfile = '~/download/gte/'+sday+'_'+stime+'ful3.jpg'
       if (not file_exist(satfile)) then begin
          print,'cannot find satellite image '+satfile
          goto,nextone
       endif
       read_jpeg,satfile,satim

   ; cut off border
   ; values for visible image 2100ful1
       a = satim
       if (stime eq '2100') then a = satim(93:1041,23:927)
   ; values for infrared image 0300ful3
       if (stime eq '0300') then begin
          a = satim(0:744-1-66,24:*)
       endif
   ; values for infrared image 1500ful3
       if (stime eq '1500') then a = satim(66:*,24:*)

       p = [ 0.02, 0.02, 0.98, 0.98 ]
       tvimage,a,position=p,/keep_aspect,ncolors=60,bottom=20
       !p.position=p
       map_set,0,-135.,/satellite,sat_p=[5.5,0.,-.5],/noerase
```

```
        map_continents,color=1
        map_grid,color=1,latdel=15,londel=15

        ; overlay flight tracks, higlight current flight
        oplot,alon,alat,color=5
        oplot,alon(aind),alat(aind),color=3

        ; overlay trajectories, highlight current time points
        for t=0,n_elements(tind)-1 do begin
          okind = where(flag(*,t) eq 0)
          oplot,tlon(okind,t),tlat(okind,t),color=4,thick=2
        endfor
        for t=0,n_elements(tind)-1 do begin
          dind = where(ttime(*,t) eq i/2.)
          if (dind(0) ge 0) then $
          oplot,tlon(dind,t),tlat(dind,t),color=2, $
                psym=sym(1),symsize=0.8
        endfor
; wait,waittime
nextone:

print,'******** FRAME = ',i
; load image in XInterAnimate buffer
        XInterAnimate,frame=i,window=0

    endfor  ; image loop

; start animation
    XInterAnimate


return
end
```

File Attachments

1) sat_trajec2.pro, downloaded 112 times