
Subject: Re: Xinteranimate "Unable to create pixmap" error

Posted by [Joe Means](#) on Thu, 04 Nov 1999 08:00:00 GMT

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Here is more info on this problem. The last two times I ran it, in response to David's comments, it hung on 106 and 107 frames. Regarding memory, there is 1Gb of system RAM and 1Gb of swapfile [virtual memory] space. Performance monitor showed that there was still 630Mb free RAM and 910Mb free swapfile space when it choked, and it had used up ca. 3000Mb of RAM when running. This works when I try to create smaller animations. Interestingly, when, in the IDL Devel Env., I hit the Reset button [includes Heap_GC, /Verbose] this recovered about half of the memory drawdown from the run, ca. 160Mb. Killing IDE recovered the rest, ca., 140Mb.

I'd sure like to find that it is just a programming error.

Can I program around this by specifically putting the pixmaps in system RAM and animating from there by loading them into the IDL window just as they are needed?

Joe Means

-----Original Message-----

From: Randall Frank [mailto:frank12@llnl.gov]

Sent: Thursday, November 04, 1999 5:37 PM

To: Joe Means

Cc: davidf@dfanning.com

Subject: Re: Xinteranimate "Unable to create pixmap" error

You've run into one of the interesting things about Windows NT. Under NT, device dependent pixmaps are allocated against the video driver. The video driver can choose to place them on the card or in system RAM. This is driver dependent. Now, under NT (unlike the Mac and Unix) driver graphics resources cannot page so you are limited to system memory no matter what (virtual memory cannot be used for these pixmaps). I would like to see the commands you are using to create this movie. I have seen 1/2 GB movies run just fine in boxes with that much RAM. I am interested to see if any of the frames are allocated or if it fails with the first frame (some drivers place restrictions on device dependent pixmaps). Also, you might want to watch the system with the task manager to see what the memory state is when the failure occurs. If there is not enough free swappable pages, you can also run into a problem.

So, you can make big movies under NT, you may be running into a driver limitation (suprising w/an nVidia card), a separate

system limit (swappable pages) or user error.

Hope it helps.
rjf.

Randall Frank | Email: rjfrank@llnl.gov
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P.O. Box 808, Mailstop:L-560 | Voice: (925) 423-9399
Livermore, CA 94550 | Fax: (925) 422-6287

David Fanning wrote:

```
> Joe Means (means@fsl.orst.edu) writes:
>
>> I run IDL 5.21 on a PC under WinNT.
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>> While running Xinteranimate.pro I got the error:
>> % WINDOW: Unable to create pixmap.
>> % Execution halted at: CW_ANIMATE_LOAD 652
>> c:\win32apps\RSI\IDL52\lib\cw_animate.pro
>>
>> This animation used about 15Mb of memory [according to Performance
>> monitor] before giving me this error. I understand the error comes from
>> running out of RAM on my video card, right? My video card is a Viper
>> v770 with 32Mb ram.
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>> My PC has 1Gb RAM, much more than is needed to run this animation. I
>> got this much RAM specifically to be able to run large animations in
>> IDL. How can I get this animation to run? I also need to be able to
>> get animations to run for which the file containing the stored images is
>> about 60Mb up to 300Mb. Do modifications need to be made to
>> Xinteranimate and its subroutines to use regular RAM instead of video
>> RAM?
>
> I'm on some shaky ground here, because I don't know
> the details as well as I would like. But my understanding is
> that most operating systems will swap video RAM memory
> with disk memory when the video RAM fills up. I would
> have thought you were running into a virtual memory
> limitation here. Do you know how much virtual memory
> you have? (System control panel under the Performance
> tab.)
>
> Also, what frame is this that you choke on? Is it
> always the same? Can I see the code used to load
> the XInterAnimate pixmaps?
>
```

> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting
> Phone: 970-221-0438 E-Mail: davidf@dfanning.com
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In answer to your questions below:

--Virtual memory [pagefile size] is just over 1Gb
--It does choke at the just about the same place.
--The code used to load the images into Xinteranimate is:

```
;;;---snip---  
;nx= about 700 & ny= about 400 & nframes = 180  
  
;----- Initialize loop to produce images  
images = Bytarr(nx,ny,nframes)  
;initialize animation  
Xinteranimate, set=[nx,ny,nframes], /track, title=title  
  
;Set up 2D arrays with points that cover the whole range of data  
;to set the axes ranges in Surface  
  zz_ = Dblarr(2,2) & xx_ = Dblarr(2,2) & yy_ = Dblarr(2,2)  
  zz_ = [ [zr[0], zr[1]], [zr[1], zr[0]] ]  
  xx_ = [ [xr[0], xr[1]], [xr[0], xr[1]] ]  
  yy_ = [ [yr[0], yr[0]], [yr[1], yr[1]] ]  
  
; - - - - - LOOP TO CREATE IMAGES - - - - -  
FOR i=0,nframes-1 DO BEGIN  
  Erase    ;Erase the window to prepare for next plot  
  
  ;;;---snip---  ---I creat the axes and plot the data here.  
  
  ;Plot the data. Psym: 3=dot, 8=usersym  
  Plots, sxyz[xc,*], sxyz[yc,*], sxyz[zc,*], /T3d, $  
  Psym=psym, Symsize=symsize, Color=datacolors  
  
  ;Read image from window and add to animation  
  image = Tvrd(x0,y0,nx,ny,!d.window)  
  images[*,*,i] = image
```

Xinteranimate, Frame=i, Image=image

anglez = (anglez+delta_angle) mod 360
ENDFOR

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Subject: Re: Xinteranimate "Unable to create pixmap" error
Posted by [davidf](#) on Fri, 05 Nov 1999 08:00:00 GMT

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> needed?

I'll see if I can get more specific information about this,
but I have a feeling we are running up against some kind
of limitation in either the graphics driver or NT itself.
I tried creating 700 by 400 windows. With my graphics
driver with 32MB RAM and 1GB swapfile, I was able to
create 150 pixmap windows before I got the "unable
to create pixmap window" message.

Since I don't have any fix, here are a couple of
suggestions. First, I presume you have thought
about smaller windows and rejected that. You
appear to have a fairly robust machine there, Joe.
I presume you have Gigs and Gigs of disk space. :-)

So I think what I would do is write these screen
dumps out to a file. Then I would do the animation
from the file using the Associated Variable method
of reading a single image from the file. Some

experiments last night on my machine (not as nice as yours unfortunately) leads me to believe that this can produce an animation with acceptable results.

I think I would start with my XMOVIE program and modify it to read from an associated variable rather from memory if I was tackling this job.

<http://www.dfanning.com/programs/xmovie.pro>

Cheers,

David

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