
Subject: Re: Quickly Erasing lines on direct graphics images
Posted by [David Fanning](#) on Sat, 12 Nov 2005 16:31:31 GMT
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Richard G. French writes:

> I have a Direct Graphics question. How can I quickly erase lines that I have
> drawn in displayed images?

The standard way to do this kind of "quick erasing" is
to use a pixmap and the "Device Copy" technique. This will
be at least a 100 times faster than redrawing your image.
Here is an article that describes the technique:

http://www.dfanning.com/widget_tips/rubberband_regular.html

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: Quickly Erasing lines on direct graphics images
Posted by [David Fanning](#) on Sat, 12 Nov 2005 22:22:49 GMT
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Folks,

> Richard G. French writes:
>
>> I have a Direct Graphics question. How can I quickly erase lines that I have
>> drawn in displayed images?
>
> The standard way to do this kind of "quick erasing" is
> to use a pixmap and the "Device Copy" technique.

Participants in my class this week wrote a pixmap object
that proved extremely useful. I've made it available here:

ftp://ftp.dfanning.com/pub/dfanning/outgoing/misc/pixmap__define.pro

To create a pixmap with an X size of 300 and a Y size
of 400 pixels, you do this:

```
pixmap = Obj_New('pixmap', XSize=300, YSize=400)
```

Given that you have something in IDL graphics window 2 that you want to copy to a pixmap, you would do this:

```
pixmap -> CopyToPixmap, 2
```

Or, you can simply draw graphics in the pixmap:

```
pixmap -> SetWindow  
Plot, findgen(11) ; etc.
```

To copy to a window, say window index number 3:

```
pixmap -> CopyToWindow, 3
```

If you wish to make the pixmap a different size (for example, in a resizable graphics window application):

```
pixmap -> Resize, newXsize, newYsize
```

But, best of all, if you want to see what you actually have in the pixmap (i.e., so you can debug your program):

```
pixmap -> Map, 1
```

To hide it again:

```
pixmap -> Map, 0
```

Be sure to destroy it when you are done. If it is mapped, you can destroy it with your mouse. If not, you must do it like this:

```
Obj_Destroy, pixmap
```

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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Subject: Re: Quickly Erasing lines on direct graphics images
Posted by [Richard French](#) on Mon, 14 Nov 2005 01:37:37 GMT
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David -

I'm beginning to see that I'd better finally bite the bullet and learn how to use IDL Objects. When did you say your long-awaited book on this topic will hit amazon.com?

Dick

PS thanks for the pixmap tips.

Subject: Re: Quickly Erasing lines on direct graphics images
Posted by [Richard French](#) on Mon, 14 Nov 2005 01:48:14 GMT
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David - I tried this, and nothing showed up in window 3 (which I had already created, using

Window,3,xsize=300,ysize=400

>

> pixmap -> SetWindow

> Plot, findgen(11) ; etc.

>

> To copy to a window, say window index number 3:

>

> pixmap -> CopyToWindow, 3

>

> If you wish to make the pixmap a different size (for

> example, in a resizable graphics window application):

>

> pixmap -> Resize, newXsize, newYsize

>

> But, best of all, if you want to see what you actually

> have in the pixmap (i.e., so you can debug your program):

>

> pixmap -> Map, 1

>

> To hide it again:

>

> pixmap -> Map, 0

In the version on the ftp site, I get:

IDL> pixmap->map,1

% Attempt to call undefined method: 'PIXMAP::MAP'.

% Execution halted at: \$MAIN\$

IDL>

>

Is there a newer version out there somewhere?

Subject: Re: Quickly Erasing lines on direct graphics images
Posted by [David Fanning](#) on Mon, 14 Nov 2005 05:19:36 GMT
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Richard G. French writes:

```
> David - I tried this, and nothing showed up in window 3 (which I had already  
> created, using  
> Window,3,xsize=300,ysize=400  
>>  
>>  pixmap -> SetWindow  
>>  Plot, findgen(11) ; etc.  
>>  
>> To copy to a window, say window index number 3:  
>>  
>>  pixmap -> CopyToWindow, 3
```

Wait! Macintosh, right!

Here is one thing I **have** learned in the past couple of weeks. If you are going to write programs that run on a Macintosh, you darn well better learn what RETAIN=2 means! In fact, if I were a Mac user, you can bet I would have this command in my IDL startup file:

```
DEVICE, RETAIN=2
```

Otherwise, not much good software is going to run on that damn machine.

That said, I, uh, put the wrong number on the RETAIN keyword. Sorry. :-)

```
> In the version on the ftp site, I get:  
> IDL> pixmap->map,1  
> % Attempt to call undefined method: 'PIXMAP::MAP'.  
> % Execution halted at: $MAIN$  
> IDL>  
>>  
> Is there a newer version out there somewhere?
```

Sigh... Computers are a mystery to me, as they are to most of my students. "Do you mean I have to **save** the file before I transfer it over there via FTP!?"

OK, I haven't **tested** this one on a Macintosh, but I think it has a better chance of working than the last one I put over there. :-)

ftp://ftp.dfanning.com/pub/dfanning/outgoing/misc/pixmap__de fine.pro

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

Subject: Re: Quickly Erasing lines on direct graphics images
Posted by [Richard French](#) on Mon, 14 Nov 2005 13:11:56 GMT
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On 11/14/05 12:19 AM, in article MPG.1de1cc535af6334a9896ac@news.frii.com,
"David Fanning" <david@dfanning.com> wrote:

>
> OK, I haven't *tested* this one on a Macintosh, but
> I think it has a better chance of working than the
> last one I put over there. :-)

Yup, works on a Mac, and ->map does the job, too. Many thanks!
Dick

One small typo: error message for CopytoPixmap is misnamed:

PRO Pixmap::CopytoPixmap, windex

IF N_Elements(windex) EQ 0 THEN windex = !D.Window

IF windex LT 0 THEN BEGIN

void = Dialog_Message('PIXMAP::COPYtoWINDOW: No graphics window
available to copy to pixmap.')

ENDIF

self -> SetWindow

Device, Copy=[0, 0, !D.X_Size, !D.Y_Size, 0, 0, windex]

END ; -----
