
Subject: PLOT() function...which WINDOW() to plot to...?
Posted by [Paul Van Delst\[1\]](#) on Wed, 12 Sep 2012 13:56:24 GMT
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Hello,

I have some code that does this:

```
; Set the graphics buffering
buffer = KEYWORD_SET(png)
```

then, inside some loops (director and file lists), a window is created like so:

```
w = WINDOW( $
WINDOW_TITLE = rts_file_list[i], $
DIMENSIONS = [800,w_ysize], $
BUFFER = buffer )
```

and then inside an addition loop (data items), a plot is created like so:

```
index++
pn = PLOT( $
channel_index, new_data, $
XTITLE=xtitle, $
TITLE = item_name[j], $
LAYOUT = [ n_col, n_row, index ], $
NAME = legend_name[0], $
COLOR = 'red', $
THICK = 2, $
CURRENT = w )
```

Note in the last command the keyword assignment "CURRENT = w".

And then finally,

```
IF ( buffer ) THEN $
w.SAVE, dir_list[n] + PATH_SEP() + $
FILE_BASENAME(file_root,".bin") + ".png", $
HEIGHT=w_ysize
```

Note that the main procedure keyword "png" is what determines whether or not the plots got to a window on screen, or to a buffer. And, if they go to a buffer, those plots are then saved as a png file.

I have noticed two things:

1) If I have existing graphics windows on screen (say from a bunch of previous plots) and I run my program to create more onscreen plots, then if I click on any of the *other* windows, my current plotting run starts plotting to *that* window, not the one defined by the graphics id variable "w".

2) If I set the "png" keyword to plot to the buffer so as to create output files (and thus no onscreen output), if I again click on *any* existing windows on screen, it becomes the target of the plotting commands and my new plots get overwritten on anything existing onscreen. Needless to say the final png output is also screwy.

Now, checking the PLOT() documentation it does not mention at all that the CURRENT keyword is anything but a binary keyword (unlike the OVERPLOT keyword where you can specify graphics references).

Fair enough. But, then, how does one set the current plotting window such that inadvertent, or purposeful, clicks on some other existing window doesn't cause the plotting to transfer to that window?

I want to create a window, and have everything plot in that window (be it onscreen or in buffer) regardless of what other graphics windows I have onscreen that I happen to be looking at and click on.

I presume there is some magical combination of keywords that will do that?

Thanks for any info.

cheers,

paulv

Subject: Re: PLOT() function...which WINDOW() to plot to...?
Posted by [David Fanning](#) on Wed, 12 Sep 2012 15:07:21 GMT
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Paul van Delst writes:

- > I want to create a window, and have everything plot in that window (be
- > it onscreen or in buffer) regardless of what other graphics windows I
- > have onscreen that I happen to be looking at and click on.
- >
- > I presume there is some magical combination of keywords that will do that?

I think you have to write your loop like this, using the SetCurrent method on the window you want to draw into:

```
w.SetCurrent
index++
pn = PLOT( $
  channel_index, new_data, $
  XTITLE=xtitle, $
  TITLE = item_name[j], $
  LAYOUT = [ n_col, n_row, index ], $
  NAME = legend_name[0], $
  COLOR = 'red', $
  THICK = 2, $
  CURRENT = 1 )
```

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: PLOT() function...which WINDOW() to plot to...?
Posted by [Paul Van Delst\[1\]](#) on Wed, 12 Sep 2012 15:58:06 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello,

On 09/12/12 11:07, David Fanning wrote:

> Paul van Delst writes:

>

>> I want to create a window, and have everything plot in that window (be

>> it onscreen or in buffer) regardless of what other graphics windows I

>> have onscreen that I happen to be looking at and click on.

>>

>> I presume there is some magical combination of keywords that will do that?

>

> I think you have to write your loop like this, using

> the SetCurrent method on the window you want to draw

> into:

>

> w.SetCurrent

> index++

> pn = PLOT(\$

[snip]

> CURRENT = 1)

Yeah, I did look at that method (and implemented it as you say) but it does not solve the basic problem.

If I click on a different window in that infinitesimal amount of time between the execution of

```
w.SetCurrent
```

and

```
pn = PLOT(...)
```

the same problem crops up since "w" is no longer the current window.

It's typical that, while plot#n is being written to screen, I'm looking at plot#(n-1). As soon as I click on that window and give it focus, everything goes pear-shaped. You're effectively forced to do non-IDL-y stuff while the program is (slowly) plotting all the FG graphics.

Additionally, it adds the burden of having to put a "w.SetCurrent" before every single FG call! And that **still** may not be efficacious depending on how "click-y" one is with existing windows.

It seems to be such a gaping hole in the basic design of these graphics features that I am sure I am still missing something.

- With DG clicking on windows was a completely separate operation from setting the current graphics window in a program via WSET.
- With FG, the two operations are intertwined. Clicking on **ANY** graphics window has exactly the same effect as executing the SetCurrent method... even if the program is running, and even if the program has been directed to send all graphics to a buffer rather than onscreen.

Unless there is something in the documentation that I'm missing (or just misunderstanding), I regard this as a fundamental flaw: there is no way for a programmer to guarantee the code will run the way it was intended (i.e. **always** plot to **this** window).

Anyhoo... I guess I'll bring the donuts to the next IDL support group meeting...

cheers,

paulv

p.s. Argh!

Subject: Re: PLOT() function...which WINDOW() to plot to...?
Posted by [David Fanning](#) on Wed, 12 Sep 2012 16:14:18 GMT
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Paul van Delst writes:

- > I want to create a window, and have everything plot in that window (be
- > it onscreen or in buffer) regardless of what other graphics windows I
- > have onscreen that I happen to be looking at and click on.
- >
- > I presume there is some magical combination of keywords that will do that?

I think you have to write your loop like this, using
the SetCurrent method on the window you want to draw
into:

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w.SetCurrent
index++
pn = PLOT( $
  channel_index, new_data, $
  XTITLE=xtitle, $
  TITLE = item_name[j], $
  LAYOUT = [ n_col, n_row, index ], $
  NAME = legend_name[0], $
  COLOR = 'red', $
  THICK = 2, $
  CURRENT = 1 )
```

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: PLOT() function...which WINDOW() to plot to...?
Posted by [Paul Van Delst\[1\]](#) on Wed, 12 Sep 2012 18:59:41 GMT
[View Forum Message](#) <> [Reply to Message](#)

On 09/12/12 11:58, Paul van Delst wrote:

- > Hello,
- >
- > On 09/12/12 11:07, David Fanning wrote:
- >> Paul van Delst writes:
- >>
- >>> I want to create a window, and have everything plot in that window (be
- >>> it onscreen or in buffer) regardless of what other graphics windows I
- >>> have onscreen that I happen to be looking at and click on.
- >>>

```
>>> I presume there is some magical combination of keywords that will do
>>> that?
>>
>> I think you have to write your loop like this, using
>> the SetCurrent method on the window you want to draw
>> into:
>>
>> w.SetCurrent
>> index++
>> pn = PLOT( $
> [snip]
>> CURRENT = 1 )
>
> Yeah, I did look at that method (and implemented it as you say) but it
> does not solve the basic problem.
```

And it introduces a new one if I set the output to go to buffer:

```
IDL> display_diffs, names=['gfortran 4.4.6 PROD', 'baseline'], /png
..etc..
% Attempt to call undefined method: 'GRAPHICSBUFFER::SETCURRENT'.
% Execution halted at: DISPLAY_RESULT_DIFFERENCES 103
   CRTM/branches/RB-2.1/src/Build/test/forward/display_diffs.pr o
%                               $MAIN$
```

So if you set the BUFFER keyword in the WINDOW() call, the method SetCurrent becomes invalid for the graphics id.

So now I have to a
IF (~buffer) THEN w.SetCurrent
before each FG call.

Wha...? I gotta be doing something wrong here.

cheers,

paulv

Subject: Re: PLOT() function...which WINDOW() to plot to...?
Posted by chris_torrence@NOSPAM on Wed, 12 Sep 2012 19:47:31 GMT
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Hi Paul,

I just changed the CURRENT keyword for IDL 8.2.2, so you can pass in a graphic reference, just like you were trying to do in your original example. It will automatically make that window be

current and ensure that your new graphics goes into that window.

Cheers,
Chris
ExelisVIS

Subject: Re: PLOT() function...which WINDOW() to plot to...?
Posted by [David Fanning](#) on Wed, 12 Sep 2012 19:52:57 GMT
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Chris Torrence writes:

> I just changed the CURRENT keyword for IDL 8.2.2, so you can
> pass in a graphic reference.

Any chance we can sneak this into IDL 8.2.1 so we can
have it this year? :-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: PLOT() function...which WINDOW() to plot to...?
Posted by [chris_torrence@NOSPAM](#) on Wed, 12 Sep 2012 20:31:34 GMT
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On Wednesday, September 12, 2012 1:53:12 PM UTC-6, David Fanning wrote:

> Chris Torrence writes:

>

>

>

>> I just changed the CURRENT keyword for IDL 8.2.2, so you can

>

>> pass in a graphic reference.

>

>

>

> Any chance we can sneak this into IDL 8.2.1 so we can
>
> have it this year? :-)
>
>
>
> Cheers,
>
>
>
> David
>

It's too late for 8.2.1, but I can email you the code if you really want the changes. However, that won't do any good for anyone else...
-Chris

Subject: Re: PLOT() function...which WINDOW() to plot to...?
Posted by [Paul Van Delst\[1\]](#) on Wed, 12 Sep 2012 21:31:02 GMT
[View Forum Message](#) <> [Reply to Message](#)

Yay! Thanks.

What's the schedule for v8.2.2 release?

cheers,

paulv

On 09/12/12 15:47, Chris Torrence wrote:

> Hi Paul,
>
> I just changed the CURRENT keyword for IDL 8.2.2, so you can pass in
> a graphic reference, just like you were trying to do in your original
> example. It will automatically make that window be current and ensure
> that your new graphics goes into that window.
>
> Cheers, Chris ExelisVIS

Subject: Re: PLOT() function...which WINDOW() to plot to...?
Posted by [Mark Piper](#) on Thu, 13 Sep 2012 16:32:09 GMT
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On Wednesday, September 12, 2012 3:30:38 PM UTC-6, Paul van Delst wrote:

>
> What's the schedule for v8.2.2 release?
>

Hi Paul,

We're currently planning to release 8.2.2 at the end of December or the beginning of January.

mp

Subject: Re: PLOT() function...which WINDOW() to plot to...?
Posted by [chris_torrence@NOSPAM](#) on Thu, 13 Sep 2012 16:32:35 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Wednesday, September 12, 2012 3:30:38 PM UTC-6, Paul van Delst wrote:

> Yay! Thanks.
>
>
>
> What's the schedule for v8.2.2 release?
>
>

It's still a little up in the air, but probably around Jan/Feb.
-Chris
