
Subject: Re: Title in iPlot
Posted by [K. Bowman](#) on Thu, 19 Oct 2006 21:48:22 GMT
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In article <MPG.1fa19ebe20226094989d53@news.frii.com>,
David Fanning <news@dfanning.com> wrote:

> Folks,
>
> Did anyone do the iTools tutorial? Do you know how to
> get the plot title closer to the plot programmatically?
> Ours is about 5 feet away. :-(
>
> Thanks,
>
> David

I can't find any iTools tutorial (this may be from the tutorial,
but memory fades), but I have been doing something like this:

```
gtitle    = 'This is the Title'  
idAnnotate = itool_obj -> FindIdentifiers('*/ANNOTATION LAYER')  
oAnnotate = itool_obj -> getByIdentifier(idAnnotate)  
oAnnotate -> add, OBJ_NEW('IDLitVisText', _STRING = gtitle, $  
    ALIGNMENT      = 0.5, $  
    VERTICAL_ALIGNMENT = 1.0, $  
    FONT_SIZE      = 24, $  
    LOCATION       = [0.0, 0.70, 0.99])
```

Ken Bowman

Subject: Re: Title in iPlot
Posted by [David Fanning](#) on Thu, 19 Oct 2006 22:12:53 GMT
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Kenneth Bowman writes:

>
> I can't find any iTools tutorial (this may be from the tutorial,
> but memory fades), but I have been doing something like this:
>
> gtitle = 'This is the Title'
> idAnnotate = itool_obj -> FindIdentifiers('*/ANNOTATION LAYER')
> oAnnotate = itool_obj -> getByIdentifier(idAnnotate)
> oAnnotate -> add, OBJ_NEW('IDLitVisText', _STRING = gtitle, \$
> ALIGNMENT = 0.5, \$

```
> VERTICAL_ALIGNMENT = 1.0, $
> FONT_SIZE          = 24, $
> LOCATION           = [0.0, 0.70, 0.99]
```

Right. I just found a Tech Tip about this that I managed to get working:

<http://www.ittvis.com/codebank/search.asp?FID=308>

Thanks,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

Subject: Re: Title in iPlot

Posted by [Benjamin Hornberger](#) on Thu, 19 Oct 2006 22:15:28 GMT

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David Fanning wrote:

```
> Did anyone do the iTools tutorial? Do you know how to
> get the plot title closer to the plot programmatically?
> Ours is about 5 feet away. :-(
```

<http://tinyurl.com/y3anut> or

<http://www.ittvis.com/codebank/search.asp?FID=308> describe how to insert the title programmatically (before the keyword VIEW_TITLE was introduced). By playing with the coordinates, you should get it to where you want it.

Sounds quite complicated at first, but along with the documentation (Appendix A in the iTools developer's guide) one can understand it eventually.

If you want to move an existing annotation programmatically, you somehow have to retrieve that annotation's identifier and modify its properties (coordinates). Don't ask me the details, but the iTools developer's guide talks about that as well.

Good luck,
Benjamin

Subject: Re: Title in iPlot

Posted by [David Fanning](#) on Thu, 19 Oct 2006 22:32:37 GMT

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Benjamin Hornberger writes:

- > <http://tinyurl.com/y3anut> or
- > <http://www.ittvis.com/codebank/search.asp?FID=308> describe how to insert
- > the title programmatically (before the keyword VIEW_TITLE was
- > introduced). By playing with the coordinates, you should get it to where
- > you want it.

We were using VIEW_TITLE and we couldn't help noticing that the title was, well, just about the next county over from the thing it was suppose to be attached to. Close enough for government work, I guess, but the journal editor wasn't too pleased with the gestalt. (We pointed out, by the way, that you could just drag the title and put it where you wanted it if it bothered you so damn much, but we didn't get very far with that line of argument.)

Anyway, solved now, thank you.

Cheers,

David

P.S. I sure hope Ken is working on his next book. Adding a title to a plot seems like the kind of thing you might want to do now and then. :-)

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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Subject: Re: Title in iPlot

Posted by [David Fanning](#) on Thu, 19 Oct 2006 22:57:50 GMT

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Kenneth Bowman writes:

- > gtitle = 'This is the Title'
- > idAnnotate = itool_obj -> FindIdentifiers('*/ANNOTATION LAYER')
- > oAnnotate = itool_obj -> getByIdentifier(idAnnotate)

```
> oAnnotate -> add, OBJ_NEW('IDLitVisText', _STRING = gtitle, $
> ALIGNMENT      = 0.5, $
> VERTICAL_ALIGNMENT = 1.0, $
> FONT_SIZE      = 24, $
> LOCATION       = [0.0, 0.70, 0.99])
```

There must be some good reason why the Annotation Layer is specified in Normalize coordinates and the rest of the Plot stuff is in Data coordinates, but it escapes me right now. In any case, having the Plot title in normalized coordinates causes the title to bounce around quite a bit as you resize the window. It starts out just right, then it gets far away again, now it jumps right into the plot!

Is there a way to put the title in the Visualization layer so I can specify its location in data coordinates?

Cheers,

David

--

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Subject: Re: Title in iPlot

Posted by [David Fanning](#) on Thu, 19 Oct 2006 23:33:58 GMT

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David Fanning writes:

```
> Is there a way to put the title in the Visualization
> layer so I can specify its location in data coordinates?
```

I feel like one of those guys who keep writing me e-mails. Why don't you just TRY a few things!!! :-(

Sorry, much easier than I expected to get it in the Visualization Layer. Now it REALLY works good, and the title even resizes itself with the plot. Sweet!

Cheers,

David

--

David Fanning, Ph.D.
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Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Title in iPlot
Posted by [Benjamin Hornberger](#) on Fri, 20 Oct 2006 00:26:04 GMT
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David Fanning wrote:

>
> Sorry, much easier than I expected to get it in the
> Visualization Layer. Now it REALLY works good, and the
> title even resizes itself with the plot. Sweet!

For the lazy among us, could you post some example code? I quickly tried to get an annotation into the visualization layer interactively and couldn't manage to do that. Does that only work programmatically? I was also annoyed by the fact that the title doesn't resize along with the plot.

Thanks,
Benjamin

Subject: Re: Title in iPlot
Posted by [David Fanning](#) on Fri, 20 Oct 2006 00:39:55 GMT
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Benjamin Hornberger writes:

> For the lazy among us, could you post some example code? I quickly tried
> to get an annotation into the visualization layer interactively and
> couldn't manage to do that. Does that only work programmatically? I was
> also annoyed by the fact that the title doesn't resize along with the plot.

Is it YOU sending me those e-mails under an assumed name, Benjamin?

Here is the code I used. Almost verbatim from the aforementioned Tech Tip:

```
tool = itGetCurrent(tool=oTool)
;get an object descriptor for the text annotation class:
oDesc = oTool->GetAnnotation('Text')
;initialize an object reference for a new text annotation:
```

```
oText = oDesc->GetObjectInstance()
;set the properties on the text annotation object:
oText->SetProperty, _STRING=title_text, _HORIZONTAL_ALIGN=1, $
  LOCATIONS=[6,330,0.99]
;add the text object to the annotation layer:
oTool->Add, oText, LAYER='VISUALIZATION LAYER'
```

The LOCATIONS obviously are in your data coordinate system units.

Cheers,

David

--

David Fanning, Ph.D.
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Subject: Re: Title in iPlot
Posted by [K. Bowman](#) on Fri, 20 Oct 2006 13:50:04 GMT
[View Forum Message](#) <> [Reply to Message](#)

In article <MPG.1fa1b0da7a5a0cc9989d56@news.frii.com>,
David Fanning <news@dfanning.com> wrote:

> There must be some good reason why the Annotation Layer
> is specified in Normalize coordinates and the rest of
> the Plot stuff is in Data coordinates, but it escapes
> me right now. In any case, having the Plot title in
> normalized coordinates causes the title to bounce
> around quite a bit as you resize the window. It starts
> out just right, then it gets far away again, now it
> jumps right into the plot!

I think the answer here is "3-D plots". When I make a 3-D plot I want the text to stay "on the glass", not rotate with the plot (and the data coordinate system). In some cases you might want the text to rotate with the plot (a la PLOT_3DBOX), but the downside is that the title can be impossible to read from some viewing angles.

I'm not sure what you mean by jumping around. If I zoom the view like this,

```
itool_id = itGetCurrent(TOOL = itool_obj)
view_1_id = itool_obj -> FindIdentifiers('*VIEW_1')
rc       = itool_obj -> DoSetProperty(view_1_id, 'CURRENT_ZOOM', 1.25)
```

```
itool_obj -> RefreshCurrentWindow
```

the text zooms also. I find this disconcerting, as it changes the "normalized" coordinates, but this is the only way I can find to do this, as VIEW_1 has a "Zoom factor" property, while the visualization layer (apparently) does not.

I suppose a possible solution is to add a second view with only an annotation layer. That view could be left alone when the view containing the data is zoomed.

By the way, wouldn't it be nice if you could use the Visualization Browser or the Property Editor to get the ID's for all of the objects and properties? The Visualization Browser says the property is "Zoom factor", while the actual ID is "CURRENT_ZOOM". The only way I know to find these things is by fooling around with FindIdentifiers

```
viz_ids = itool_obj -> FindIdentifiers('*Visualization Layer*')  
PRINT, viz_ids
```

Ken

Subject: Re: Title in iPlot

Posted by [David Fanning](#) on Fri, 20 Oct 2006 14:26:32 GMT

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Kenneth Bowman writes:

```
> By the way, wouldn't it be nice if you could use the Visualization Browser or  
> the Property Editor to get the ID's for all of the objects and properties? The  
> Visualization Browser says the property is "Zoom factor", while the actual ID is  
> "CURRENT_ZOOM". The only way I know to find these things is by fooling around  
> with FindIdentifiers  
>  
> viz_ids = itool_obj -> FindIdentifiers('*Visualization Layer*')  
> PRINT, viz_ids
```

Yes, this is really the most frustrating part of doing anything with iTools. But, oddly enough, the same problem pops up with shapefiles. I have two examples of using shapefiles on my web page, and yet I get e-mails all the time from people who are frustrated trying to read and display shapefiles other than the examples I use.

I spent yesterday building a shapefile browser so you could examine the file and entity attributes in a shapefile before you had to try to decipher the darn thing. It occurs to me that something very like this

could be written for iTools. In fact, the guy who wrote it, Ken, would probably get rich. :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

Subject: Re: Title in iPlot

Posted by [K. Bowman](#) on Fri, 20 Oct 2006 14:44:51 GMT

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In article <MPG.1fa28a87ce8ccfe6989d59@news.frii.com>,

David Fanning <news@dfanning.com> wrote:

> It occurs to me that something very like this
> could be written for iTools. In fact, the guy who
> wrote it, Ken, would probably get rich. :-)

Rich in dollars, or rich in friends?

Ken

Subject: Re: Title in iPlot

Posted by [David Fanning](#) on Fri, 20 Oct 2006 15:20:05 GMT

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Kenneth Bowman writes:

> Rich in dollars, or rich in friends?

No, no. I meant rich in karma. For the next life. :-)

Cheers,

David

--

David Fanning, Ph.D.

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

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Subject: Re: Title in iPlot

Posted by [Michael Galloy](#) on Fri, 20 Oct 2006 15:30:26 GMT

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Kenneth Bowman wrote:

```
> By the way, wouldn't it be nice if you could use the Visualization Browser or
> the Property Editor to get the ID's for all of the objects and properties? The
> Visualization Browser says the property is "Zoom factor", while the actual ID is
> "CURRENT_ZOOM". The only way I know to find these things is by fooling around
> with FindIdentifiers
>
> viz_ids = itool_obj -> FindIdentifiers('*Visualization Layer*')
> PRINT, viz_ids
```

Yes, I got frustrated with that. That's why I wrote a browser:

<http://michaelgalloy.com/2006/07/26/itools-identifier-browser.html>

It's not integrated into the Visualization Browser, but it has been useful for me.

Mike

--

www.michaelgalloy.com

Subject: Re: Title in iPlot

Posted by [David Fanning](#) on Fri, 20 Oct 2006 15:41:20 GMT

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Michael Galloy writes:

```
> Yes, I got frustrated with that. That's why I wrote a browser:
>
> http://michaelgalloy.com/2006/07/26/itools-identifier-browser.html
>
> It's not integrated into the Visualization Browser, but it has been
> useful for me.
```

Fame is so, so fleeting...

Thanks, Michael!

Cheers,

David

--

David Fanning, Ph.D.

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

Subject: Re: Title in iPlot
Posted by [K. Bowman](#) on Fri, 20 Oct 2006 16:19:16 GMT
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In article <MPG.1fa29c00cbca802c989d5b@news.frii.com>,
David Fanning <news@dfanning.com> wrote:

> Michael Galloy writes:
>
>> Yes, I got frustrated with that. That's why I wrote a browser:
>>
>> <http://michaelgalloy.com/2006/07/26/itools-identifier-browser.html>
>>
>> It's not integrated into the Visualization Browser, but it has been
>> useful for me.
>
> Fame is so, so fleeting...
>
> Thanks, Michael!
>

Dang, it looks like I won't be "rich" after all.

Ken

Subject: Re: Title in iPlot
Posted by [David Fanning](#) on Sat, 28 Oct 2006 17:00:06 GMT
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Benjamin Hornberger writes:

> David Fanning wrote:
>> Did anyone do the iTools tutorial? Do you know how to
>> get the plot title closer to the plot programmatically?
>> Ours is about 5 feet away. :-(
>
> <http://tinyurl.com/y3anut> or
> <http://www.itvis.com/codebank/search.asp?FID=308> describe how to insert
> the title programmatically (before the keyword VIEW_TITLE was
> introduced). By playing with the coordinates, you should get it to where
> you want it.

- >
- > Sounds quite complicated at first, but along with the documentation
- > (Appendix A in the iTools developer's guide) one can understand it
- > eventually.
- >
- > If you want to move an existing annotation programmatically, you somehow
- > have to retrieve that annotation's identifier and modify its properties
- > (coordinates). Don't ask me the details, but the iTools developer's
- > guide talks about that as well.

As a follow-up to this, I thought I might write a short article about how to insert a title into the VISUALIZATION layer, rather than the ANNOTATION layer, so that the title would move appropriately with the plot itself. I had done this empirically, but I wanted to know how to do it programmatically.

To do so, I need to know what in direct graphics would be ![XY].CRANGE. The essential problem is how do I extract that kind of information from an iTool plot.

I found an article on the ITT Tech Tip web page that looked promising:

<http://www.ittvis.com/services/techtip.asp?ttid=3812>

The title of the article is "In iTools Synchronizing Annotation Layer Movement With Visualization Layer Movement". Just what I want to do. The article comes with 9 pages (!) of heavily annotated IDL code that explains how this is done. Interesting reading.

Unfortunately, when you get to the end of all that typing, the darn thing doesn't work. Doesn't come close to working, as far as I can tell. The colorbar doesn't even line up with the axes, let alone move with it. And it doesn't matter if I type the commands, or I use the very helpful code that can be downloaded from the tip page. Alas, NOTHING works!

Does anyone have any idea how I might be able to do something like this?

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.
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Sepore ma de ni thui. ("Perhaps thou speakest truth.")
