
Subject: Plot3D bug in 8.1

Posted by [David Grier](#) on Mon, 09 May 2011 13:13:53 GMT

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Dear Folks,

I've confirmed that the following code works in IDL 8.0.1 but fails in 8.1, even though the documentation for Plot3D has not changed between the two versions:

```
x = randomu(seed, 100)
y = randomu(seed, 100)
z = randomu(seed, 100)
orb = orb()
p = plot3d(x, y, z, SYM_OBJECT = orb)
```

In IDL 8.0.1, this creates an object graphics plot with spheres at the vertices.

By contrast, IDL 8.1 emits the following error message, and no plot:

```
% PLOT3D: Unknown property: SYM_OBJECT
% Execution halted at: $MAIN$
```

This quite clearly is a bug, therefore.

Strangely enough, iplot still understands the SYM_OBJECT keyword in IDL 8.1.

All the best,

David

Subject: Re: Plot3D bug in 8.1

Posted by [David Fanning](#) on Mon, 09 May 2011 16:26:59 GMT

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Paulo Penteadó writes:

```
> I can confirm the bug, and that it was not present in 8.0. My guess is
> that it came from the _strict_extra that started being used in the
> Graphics routines, with sym_object ending up left out somewhere along
> the way.
```

That would make sense, except that it doesn't explain why it worked before. For it to be trapped by _STRICT_EXTRA it would have to be mis-spelled in the code. If it is

mis-spelled, how did it work before?

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: Plot3D bug in 8.1

Posted by [penteado](#) on Mon, 09 May 2011 17:09:12 GMT

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On May 9, 1:26 pm, David Fanning <n...@idlcoyote.com> wrote:

> Paulo Penteado writes:

>> I can confirm the bug, and that it was not present in 8.0. My guess is

>> that it came from the `_strict_extra` that started being used in the

>> Graphics routines, with `sym_object` ending up left out somewhere along

>> the way.

>

> That would make sense, except that it doesn't explain why

> it worked before. For it to be trapped by `_STRICT_EXTRA`

> it would have to be mis-spelled in the code. If it is

> mis-spelled, how did it work before?

Ok, that was a naive first guess. I had noticed that in 8.1 checking for invalid arguments appeared in Graphics, so I just guessed it was `_strict_extra`, as had been suggested here (by you, if I remember right).

But it is a bit more involved. In 8.1 the Graphics class got a new method, `VerifyProperty`, to do the checking and throw an error if a property is not found. It determines the valid properties from the `QueryProperty` method of the right class, which is where the error lies, since 8.0: `Plot3D::QueryProperty` does not have `SYM_OBJECT` among its properties. In 8.0 it was no problem, because any nonexistent properties were ignored. It flared up now that there is checking.

The fix for ITTVIS to do: in line 1405 of `graphic__define.pro`, inside `Plot3D::QueryProperty`, add `'SYM_OBJECT'` to the properties array. I verified that this fixes the problem.

The fix that you can do, to get it to work, without changing source code: Use the new 'undocumented' keyword (itself, amusingly,

undocumented), which disables the checking:

```
p=plot3d(/test,sym_object=orb(),/undocumented)
```

By the way, could not this kind of debugging qualify me to report bugs directly to ITTVIS, instead of having to go through their Brazilian representative, as it seems I am required to do, just because they issued my license?

Subject: Re: Plot3D bug in 8.1

Posted by [David Fanning](#) on Mon, 09 May 2011 17:19:00 GMT

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Paulo Penteado writes:

> By the way, could not this kind of debugging qualify me to report bugs
> directly to ITTVIS, instead of having to go through their Brazilian
> representative, as it seems I am required to do, just because they
> issued my license?

I don't know about that, but anyone who can follow iTool code and find bugs should get an automatic three-year membership in the IEPA. I'll forward you name to the Committee. You should be hearing something shortly (within a year or two, I should think). :-)

http://www.idlcoyote.com/misc_tips/iepa.php

Cheers,

David

--

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Subject: Re: Plot3D bug in 8.1

Posted by [David Fanning](#) on Mon, 09 May 2011 17:47:01 GMT

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Paulo Penteado writes:

- > The fix for ITTVIS to do: in line 1405 of graphic__define.pro, inside
- > Plot3D::QueryProperty, add 'SYM_OBJECT' to the properties array. I
- > verified that this fixes the problem.

This is terrible embarrassing, but I can't make this change because I can't write into the ITTVIS directory. Nor have I been able to figure out how to change the permissions on these kinds of directories in Windows 7. (Right clicking, selecting Permissions, etc., *appears* to work, but it doesn't actually work.)

I know this is a Windows 7 thing, but does anyone know how to do this? Dick Jackson was pointing out a useful trick to me the other day that involved writing something into the Help directory, and I tried for 45 minutes to get that to work without success, too.

It must involve somehow taking over ownership of the files from the "installer," but either I can't follow directions (pretty likely) or Windows wants to make it so hard you need a Ph.D. in Computer Science to do it.

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: Plot3D bug in 8.1

Posted by [penteado](#) on Mon, 09 May 2011 17:47:37 GMT

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On May 9, 2:19 pm, David Fanning <n...@idlcoyote.com> wrote:

- > Paulo Penteado writes:
- >> By the way, could not this kind of debugging qualify me to report bugs
- >> directly to ITTVIS, instead of having to go through their Brazilian
- >> representative, as it seems I am required to do, just because they
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- >
- > I don't know about that, but anyone who can follow iTool
- > code and find bugs should get an automatic three-year
- > membership in the IEPA. I'll forward you name to the

- > Committee. You should be hearing something shortly
- > (within a year or two, I should think). :-)
- >
- > http://www.idlcoyote.com/misc_tips/iepa.php

I can even answer the most recent test question: in Brazil a new 1-year academic license cost me about 4 months' worth of health insurance; a renew, about half that. By last year's prices, a commercial fixed license would be almost 3 years of insurance, and a commercial floating license would be about 5 years.

Subject: Re: Plot3D bug in 8.1

Posted by [penteado](#) on Mon, 09 May 2011 17:51:07 GMT

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On May 9, 2:47 pm, David Fanning <n...@idlcoyote.com> wrote:

- > It must involve somehow taking over ownership of the
- > files from the "installer," but either I can't follow
- > directions (pretty likely) or Windows wants to make it
- > so hard you need a Ph.D. in Computer Science to do it.

If it is like Vista, I would try starting Windows Explorer with a right-click to select "Run as administrator" (or something like it), which I think would be like doing a sudo.

Subject: Re: Plot3D bug in 8.1

Posted by [David Fanning](#) on Mon, 09 May 2011 18:05:08 GMT

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Paulo Penteado writes:

- > If it is like Vista, I would try starting Windows Explorer with a
- > right-click to select "Run as administrator" (or something like it),
- > which I think would be like doing a sudo.

Yes, that normally works, but it takes more than this in the Program Files directory. I think it requires you to change owners somehow, too. Anyway, I just saved `graphic__define.pro` in a local directory that gets searched first, so there is no problem. Maybe this is even a better solution, since there is no question about which system files have been changed.

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>
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Subject: Re: Plot3D bug in 8.1
Posted by [David Grier](#) on Tue, 10 May 2011 01:14:57 GMT
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On 5/9/11 2:05 PM, David Fanning wrote:

> Paulo Penteado writes:
>
>> If it is like Vista, I would try starting Windows Explorer with a
>> right-click to select "Run as administrator" (or something like it),
>> which I think would be like doing a sudo.
>
> Yes, that normally works, but it takes more than this
> in the Program Files directory. I think it requires
> you to change owners somehow, too. Anyway, I just
> saved graphic__define.pro in a local directory that
> gets searched first, so there is no problem. Maybe
> this is even a better solution, since there is no
> question about which system files have been changed.
>
> Cheers,
>
> David
>
>

Thanks very much for tracking down the source of this bug
and even finding an arcane workaround.

All the best,

David

Subject: Re: Plot3D bug in 8.1
Posted by [chris_torrence@NOSPAM](#) on Wed, 11 May 2011 18:41:56 GMT
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On May 9, 7:14 pm, David Grier <david.gr...@nyu.edu> wrote:

> On 5/9/11 2:05 PM, David Fanning wrote:

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>> Paulo Penteado writes:

>

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>>> right-click to select "Run as administrator" (or something like it),
>>> which I think would be like doing a sudo.

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>> Yes, that normally works, but it takes more than this
>> in the Program Files directory. I think it requires
>> you to change owners somehow, too. Anyway, I just
>> saved graphic__define.pro in a local directory that
>> gets searched first, so there is no problem. Maybe
>> this is even a better solution, since there is no
>> question about which system files have been changed.

>

>> Cheers,

>

>> David

>

> Thanks very much for tracking down the source of this bug
> and even finding an arcane workaround.

>

> All the best,

>

> David

Hi David,

Thanks for reporting this bug. The SYM_OBJECT property has now been added to the list of allowed properties for Plot, Plot3D, and Vector.

This will be available in the next version of IDL. In the meantime, you can use the /UNDOCUMENTED keyword, just like Paulo suggested (this was exactly why that keyword was added!).

Cheers,

Chris

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