
Subject: large 3D array plot

Posted by [adisn123](#) on Thu, 17 Aug 2006 22:45:50 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hi,

My 3D vecotr(x, y, z)array is about (3, 210,000)size. Yeb. it's huge.
So, when I plot in 3D using xplot3D, it takes a quite of time (more
10sec.), and it
lags everytime I try to rotate.

Is there anyone who knows better 3D plotting tool to display such a
huge array in more efficient way?

THanks.,

Subject: Re: large 3D array plot

Posted by [Rick Towler](#) on Fri, 18 Aug 2006 23:39:59 GMT

[View Forum Message](#) <> [Reply to Message](#)

adisn123 wrote:

>> Another thing to consider would be to write your own viewer which HIDEs
>> almost all of your data when you rotate the objects. You could do this
>> by plotting the data in 2 IDLgrPolyline objects. One with some data,
>> the other with lots. When a mousedown event is processed you hide the
>> 'lots of data' polyline. At mouseup you unhide it. This probably would
>> be an easy hack on XPLOT3D.

>

> I'm not familiar with IDLgrPolyline objects. but, it seems like it draws
> a line between points, which I don't want to do.

XPLOT3D is using IDLgrPolyline to plot your data (If you look at the
docs regarding IDLgrPolyline, you'll see that it has the same
LINESTYLES). So you can choose "no line" and only draw the symbols,
just like you are currently doing.

> What do you mean by "HIDEs almost all of your data when you rotate the
> objects."?

Check out the IDLgrPolyline keyword HIDE in the docs.

> How come you want to hide part of your date whilte rotating in 3D, then
> what's the point of viewing in 3D?

Tools like XPLOT3D and XOBJVIEW only draw your 3d object when you change
the view in some way. When you are rotating and zooming an object,

you're changing the view repeatedly and when drawing takes a long time (like it does with your data) these tasks become quite tedious.

I was suggesting that you hide most (not all) of your data to make rotating and zooming easier since with fewer objects to draw the program will be much more responsive. Drawing just a subset of your data will still allow you to have some sort of reference when manipulating it. When you are done rotating/zooming etc. then *all* of the data is drawn so you see the entire data set.

It is just a technique to improve the response of the program. If you just want to view your data from all sides then simply make a movie while rotating the data and forget about all of this. But if you want to interact with this data set, explore it so to speak, you'll want to improve the response of the program otherwise you'll go mad waiting for the thing to draw as you're dragging your data around.

-Rick

Subject: Re: large 3D array plot
Posted by [adisin123](#) on Mon, 21 Aug 2006 16:09:43 GMT
[View Forum Message](#) <> [Reply to Message](#)

I see.

It gave me a great deal of help.
I really appreciate your detail response of my question.
Thanks...

Rick Towler wrote:

```
> adisin123 wrote:
>>> Another thing to consider would be to write your own viewer which HIDES
>>> almost all of your data when you rotate the objects. You could do this
>>> by plotting the data in 2 IDLgrPolyline objects. One with some data,
>>> the other with lots. When a mousedown event is processed you hide the
>>> 'lots of data' polyline. At mouseup you unhide it. This probably would
>>> be an easy hack on XPLOT3D.
>>
>> I'm not familiar with IDLgrPolyline objects. but, it seems like it draws
>> a line between points, which I don't want to do.
>
> XPLOT3D is using IDLgrPolyline to plot your data (If you look at the
> docs regarding IDLgrPolyline, you'll see that it has the same
> LINESTYLES). So you can choose "no line" and only draw the symbols,
> just like you are currently doing.
```

>
>
>> What do you mean by "HIDES almost all of your data when you rotate the
>> objects."?
>
> Check out the IDLgrPolyline keyword HIDE in the docs.
>
>> How come you want to hide part of your data while rotating in 3D, then
>> what's the point of viewing in 3D?
>
> Tools like XPLOT3D and XOBJVIEW only draw your 3d object when you change
> the view in some way. When you are rotating and zooming an object,
> you're changing the view repeatedly and when drawing takes a long time
> (like it does with your data) these tasks become quite tedious.
>
> I was suggesting that you hide most (not all) of your data to make
> rotating and zooming easier since with fewer objects to draw the program
> will be much more responsive. Drawing just a subset of your data will
> still allow you to have some sort of reference when manipulating it.
> When you are done rotating/zooming etc. then *all* of the data is drawn
> so you see the entire data set.
>
> It is just a technique to improve the response of the program. If you
> just want to view your data from all sides then simply make a movie
> while rotating the data and forget about all of this. But if you want
> to interact with this data set, explore it so to speak, you'll want to
> improve the response of the program otherwise you'll go mad waiting for
> the thing to draw as you're dragging your data around.
>
> -Rick
