
Subject: Re: reading large multicolumn data file
Posted by [penteado](#) on Fri, 06 Aug 2010 03:05:14 GMT
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On Aug 5, 8:54 pm, bio_amateur <hoangtrongminht...@gmail.com> wrote:

```
> I have a data file (a few hundreds MB). This is a text file in the
> format X Y1 Y2 Y3 (first column is the common x-axis data, next
> columns are data). I can read the data and plot easily with xmgrace
> using
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> xmgrace -nxy data.dat
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> which take a few seconds to plot. Now, I want to use IDL to read this
> file and display using iTool. What I did was
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> data = read_ascii(filename)
> myPlotData = data.(0)
> rows = (size(myPlotData, /dimension))[0]
> for ii=1, rows do begin
>     iPlot, myPlotData[0,*], myPlotData[ii,*], /overplot
> end
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> This method takes so long. Could someone good at this can point out a
> solution for me.
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The iTools, as any use of object graphics, can get heavy in memory when the number of vertices is large (typically, from several hundred thousand). This may be alleviated if change your IDL preferences to use hardware rendering, in case it is not already in hardware. Other than that, only using direct graphics will solve it, as in

```
minx=min(myplotdata[0,*],max=maxx)
miny=min(myplotdata[1:*,*],max=maxy)

plot,[minx,maxx],[miny,maxy],/nodata
for ii=1,rows-1 do oplot,myplotdata[0,*],myplotdata[ii,*]
```

Subject: Re: reading large multicolumn data file
Posted by [bio_amateur](#) on Fri, 06 Aug 2010 14:23:45 GMT
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On Aug 5, 11:05 pm, Paulo Penteado <pp.pente...@gmail.com> wrote:

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```

Now, plotting is pretty fast. However, data reading is still slow, compared to xmgrace. Is there a better way than using the 2 steps: read the data into a structure, and convert a structure to an array as the way I did.

The second question is xmgrace automatically choose one color for each data field (Y1, Y2, ...). However, with direct graphics in IDL, I only get one single color. How could we resolve this in IDL.

Thanks,
Tuan

Subject: Re: reading large multicolumn data file
 Posted by [bio_amateur](#) on Fri, 06 Aug 2010 14:23:58 GMT
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On Aug 5, 11:05 pm, Paulo Penteado <pp.pente...@gmail.com> wrote:

> On Aug 5, 8:54 pm, bio_amateur <hoangtrongminht...@gmail.com> wrote:

>

>

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> plot,[minx,maxx],[miny,maxy],/nodata

> for ii=1,rows-1 do oplot,myplotdata[0,*],myplotdata[ii,*]

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The second question is xmgrace autoamtically choose one color for each
data field (Y1, Y2, ...). However, with direct graphics in IDL, I only
get one single color. How could we resolve this in IDL.

Thanks,
Tuan

Subject: Re: reading large multicolumn data file
Posted by [David Fanning](#) on Fri, 06 Aug 2010 14:46:21 GMT
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bio_amateur writes:

- > Now, plotting is pretty fast. However, data reading is still slow,
- > compared to xmgrace. Is there a better way than using the 2 steps:
- > read the data into a structure, and convert a structure to an array as
- > the way I did.
- >
- > The second question is xmgrace automatically choose one color for each
- > data field (Y1, Y2, ...). However, with direct graphics in IDL, I only
- > get one single color. How could we resolve this in IDL.

I'd try something like this:

```
rows = File_Lines(filename)
data = FltArr(4, rows)
Openr, lun, filename, /Get_Lun
ReadF, lun, data
Free_Lun, data
data = Transpose(data)
```

```
colors = ['black', 'white', 'red', 'green', 'blue']
Plot, data[*], data[1,*], Background=FSC_Color(colors[1]), $
  Color=FSC_Color(colors[0]), /NoData
FOR j=1,3 DO OPlot, data[*], data[*], COLOR=FSC_Color(colors[j+1])
```

You can find FSC_Color in the Coyote Library:

<http://www.dfanning.com/documents/programs.html>

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: reading large multicolumn data file
Posted by [David Fanning](#) on Fri, 06 Aug 2010 15:17:53 GMT

David Fanning writes:

> Free_Lun, data

Whoops! That's not likely to work. :-(

Try, "Free_Lun, lun"

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: reading large multicolumn data file

Posted by [bio_amateur](#) on Fri, 06 Aug 2010 18:22:12 GMT

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On Aug 6, 11:17 am, David Fanning <n...@dfanning.com> wrote:

> David Fanning writes:

>> Free_Lun, data

>

> Whoops! That's not likely to work. :-(

>

> Try, "Free_Lun, lun"

>

> 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.")

It works. Many thanks for this powerful package, David.

Tuan.
