Subject: Re: Help needed with reading ASCII data Posted by Michael Asten on Fri, 03 Dec 1999 08:00:00 GMT

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Liam Gumley wrote: I'm assuming your data file looks something like this:

```
>
> 0, 0, 0.998
> 1, 0, 0.976
> 2, 0, 0.876
> It sounds like you're not really interested in the x and y coordinates,
> since they are probably the same for all 22 time phases. In this case,
 you can read the array in one hit:
> :- Read the data file
> openr, lun, 'mri.dat', /get lun
> data = fltarr(3, 38808)
> readf, lun, data
> free lun, lun
> :- Extract the magnitude array
> h = data[2, *]
> h = reform(h, 49, 36, 22)
> ;- Visualize the data as an image sequence
> for index = 0, 21 do tvscl, rebin(h[*, *, index], mag*49, mag*36, 1,
> /sample)
>
> Cheers.
> Liam.
```

Or, if your data file is not always of identical length, try using the idl routine READ_ASCII, which will read an arbitrary number of columns and rows of any data type, into a structure.

Regards, Michael Asten

Subject: Re: Help needed with reading ASCII data Posted by John Keck on Fri, 03 Dec 1999 08:00:00 GMT View Forum Message <> Reply to Message

- > I'm completely new to IDL, and I have a set of data in ASCII format. It
- > is extracted from MRI data. It is a file which contains 3 columns of

- > data. The first column is the x, the second is the y coordinate and the
- > third is just a scaled magnitude value between 0 and 1. There are 38808
- > rows of data, and the matrix size is (49, 36) and there are 22 time
- > phases. I want to know if anyone has had experience in reading in data
- > of this type, and how to put it into an array that can be read by IDL.

Dear Scott,

The easier thing to do (programming-wise) is to use the READCOL procedure, which I believe is part of one of the standard libraries that you can download (you can search these libraries from http://www.astro.washington.edu/deutsch/idl/htmlhelp/index.h tml)

Your data file is a bit big though, so that may take quite a while. I've found a much faster way to read in big files is to set up a structure and a print-type format to read in the data. Something like this:

filename = "foo.dat" fmt = "(i3,3F7.2)"; of course this has to match the format of your columns

```
cog = {det $
,t: 0 $
,x: 0. $
,y: 0. $
,z: 0.)
```

all = REPLICATE(cog,nl); NL = # lines in file

OPENR,lun,/GET_LUN,filename READF,lun, FORMAT=fmt,all FREE_LUN,lun END

Anyway, that should read in your file at one blow. You can then re-arrange the data in your arrays as you like. (You may want to look up the IDL help files on structures; it might be helpful to know that you can address the fields of a structure with numbers and can to a large extent treat a structure as an array.)

I hope that's helpful.

Sincerely,

John Keck

Subject: Re: Help needed with reading ASCII data Posted by Liam Gumley on Fri, 03 Dec 1999 08:00:00 GMT

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Scott Reid wrote:

- > I'm completely new to IDL, and I have a set of data in ASCII format. It
- > is extracted from MRI data. It is a file which contains 3 columns of
- > data. The first column is the x, the second is the y coordinate and the
- > third is just a scaled magnitude value between 0 and 1. There are 38808
- > rows of data, and the matrix size is (49, 36) and there are 22 time
- > phases. I want to know if anyone has had experience in reading in data
- > of this type, and how to put it into an array that can be read by IDL.
- > I know how to open the data and display it, with the following

```
> openr, 1, filepath(..)
> :
> : HELP WITH THE READING OF THE ACII DATA PLEASE!!!!!!
> :
> :
> h=fltarr(49,36,22)
> close, 1
> loadct, 3
```

- > h = rebin(h, 32, 32, 22)
- > frames = fltarr(256, 256, 22)
- > window, 1, TITLE='Bloodflow animation', xsize=256, ysize=256
- > for i=0, 22 do begin surface, h[*, *, i], zrange=[0, 1] & frames[0,0,i]
- > = tvrd() & end

>

- > If anyone could help me with reading the ASCII data and putting it into
- > an array which IDL can read, I would be most grateful

I'm assuming your data file looks something like this:

```
0, 0, 0.998
1, 0, 0.976
2, 0, 0.876
```

It sounds like you're not really interested in the x and y coordinates, since they are probably the same for all 22 time phases. In this case, you can read the array in one hit:

```
;- Read the data file openr, lun, 'mri.dat', /get_lun data = fltarr(3, 38808) readf, lun, data free_lun, lun
```

;- Extract the magnitude array h = data[2, *]

```
h = reform(h, 49, 36, 22)

;- Visualize the data as an image sequence
mag = 5
for index = 0, 21 do tvscl, rebin(h[*, *, index], mag*49, mag*36, 1,
/sample)

Cheers,
Liam.

--
Liam E. Gumley
Space Science and Engineering Center, UW-Madison
http://cimss.ssec.wisc.edu/~qumley
```

Subject: Re: Help needed with reading ASCII data Posted by Bernard Puc on Fri, 03 Dec 1999 08:00:00 GMT View Forum Message <> Reply to Message

Scott Reid wrote:

>

> Hi All

>

- > I'm completely new to IDL, and I have a set of data in ASCII format. It
- > is extracted from MRI data. It is a file which contains 3 columns of
- > data. The first column is the x, the second is the y coordinate and the
- > third is just a scaled magnitude value between 0 and 1. There are 38808
- > rows of data, and the matrix size is (49, 36) and there are 22 time
- > phases. I want to know if anyone has had experience in reading in data
- > of this type, and how to put it into an array that can be read by IDL.

I typically do something like this when reading delimited ASCII data. Each line is read into a string and then the string is divided into an array of strings. Then you do what you will with the values in the array:

```
OPENR,Lun,/Get_Lun,Filename
sString = "
WHILE NOT(EOF(Lun)) DO BEGIN
READF,Lun,sString
tempArray = str_sep(sString, string(byte(32)));Replace with ASCII code
of delimiter
index = WHERE( tempArray NE ", num)
IF num GT 0 THEN tempArray = tempArray[index]

x = float(tempArray[0])
y = float(tempArray[1])
```

s = float(tempArray[2]) ;You would assign these values to fill your array: fltarr(49,36,22)

END

--

Bernard Puc AETC, INC.

bpuc@va.aetc.com 1225 Jefferson Davis Highway #800

(703) 413-0500 Arlington, VA 22202