Subject: Re: structure use

Posted by R.Bauer on Tue, 02 Jul 2002 07:41:24 GMT

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Patrick McEnaney wrote:

>

- > Folks- This one should be easy I guess. I'm using a pointer to a 3d
- > structure array to store ascii data so I can create simple plots. I've
- > got the structure set as such:

>

> profiledata=fltarr(11,9999,3)

>

- > Then when I access the data I just call (*pstate).profiledata(5,*,0)
- > for a specific column of data, (*pstate) is the pointer. Here's my
- > problem, and I'm challenged when it comes to fixing bugs so don't
- > laugh if the fix is really obvious, my file sizes vary from just a few
- > hundred samples to several thousand samples depending on the rate the
- > instrumentation is set at. So if the file is 500 lines I'm reading in
- > 500 valus in an array that 9999 samples long, the result is a decent
- > profile of data but there are lots of unwanted data values plotting as
- > well. So I want to plot just the good values and not the zeroes but
- > the use of a structure doesn't allow changing a field size no matter
- > if I use a named or anonymous type from what I've read. The question
- > is, how do I just read the good values and ignore the zeroes.

Dear Patrick,

lots of question lots of answers.

Your problem is that's you always read with a fix dimensioned array.

If you use a small routine fileline you can dimension your reading array to the number of availabel lines of the file.

If you like it more comfartable you can use e.g. read_data_file to read in the whole file in a data-structure.

http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_source/idl_html/dbase/download/fileline.tar.gz http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_source/idl _html/dbase/download/read_data_file.tar.gz

If you like to have fix sizes you can use the where function to determine the 0 values.
e.g. valid=where(values[0,*,0] ne 0, count) if count gt 0 then plot,values[0,valid,0]

>

- > Another question, hopefully really easy this time...I've been
- > attempting to use idl to visualize data or otherwise just program for
- > the better part of two years. I get pulled away from the programming
- > to perform other tasks very frequently so the results of my learning
- > are, well....mixed. Before I started using idl I hadn't programmed at
- > all in several years since taking fortran in college. I've taken two
- > classes from RSI and have the books from the course and also Dr.
- > Fanning's book. The problem I have with these books is that I haven't
- > learned much from them because I don't perceive them as about idl as a
- > programming language (no offense to any of the authors). For example
- > if I went out and bought an O'Reilly or some other simple step by step
- > discussing perl or C as a programming language. What I'm looking for
- > is a good, simple to follow book with lots of examples (I hesitate to
- > say a dummies guide because I can't stand the writing style). I
- > noticed several additional books on Dr. Fanning's website, what is the
- > opinion on these? What I'm essentially looking for is an IDL
- > programming guide for non-programmer scientists and I'd like to get an
- > opinion before buying.

If you like you can meet us in one of our lessons at FZ-J�lich. Next one is end of October.

Reimar

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Reimar Bauer

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a IDL library at ForschungsZentrum Juelich

http://www.fz-juelich.de/icg/icg1/idl_icglib/idl_lib_intro.h tml

Subject: Re: structure use

Posted by btupper on Tue, 02 Jul 2002 18:49:13 GMT

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On 1 Jul 2002 15:51:18 -0700, patrick@es.ucsc.edu (Patrick McEnaney)

wrote:

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- > if I use a named or anonymous type from what I've read. The question
- > is, how do I just read the good values and ignore the zeroes.

>

Hi Patrick, Are you using a SeaBird CTD? If so, there is a line in the ASCII header of a converted file that tells you how many records (rows) are in the file... I think it is NQUAN.

If you are using this instrument, you could use the file readers we have developed. I would have to hunt around a bit, but they aren't too far away.

- > What I'm essentially looking for is an IDL
- > programming guide for non-programmer scientists and I'd like to get an
- > opinion before buying.

In addition to David's book, you *really* should have Liam Gumley's book, "Practical IDL Programming" (www.gumley.com) Each is indispensible to me.

Ben

Subject: Re: structure use

Posted by Paul Sorenson on Wed, 03 Jul 2002 04:46:27 GMT

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Patrick McEnaney wrote:

> the use of a structure doesn't allow changing a field size

You can get around this by using a pointer in your structure. For example:

*(*pState).pProfileData=fltarr(11,500,3)
...do some stuff...

*(*pState).pProfileData=fltarr(11,600,3)

-Paul Sorenson

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