
Subject: Writing large [x,x,x,x] files
Posted by [Sean Heukels](#) on Fri, 09 Mar 2001 15:33:21 GMT
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What write procedure can I use when I want to write a matrix to file that is 128x128, multislice and with multi timepoint

Say data(128,128,4,50).

I tried PNG, but it says it will only take (1-4, n, m)

Does anyone know of a better file format ???

And furthermore, would that format be able to allow a user to write a little bit of extra info, say a description to a header/footer in that same file ??

Its just that I've written a nice program, but I want to export the data to some kind of format. So I can make it portable and re-open the again. The raw format that I imported takes a long while to be decoded, so I wouldn't mind having some other more common format

Greetings Sean

Subject: Re: Writing large [x,x,x,x] files
Posted by [Liam E. Gumley](#) on Fri, 09 Mar 2001 17:58:16 GMT
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Sean Heukels wrote:

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- > some kind of format. So I can make it portable and re-open the again.
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For a simple format that can be used in IDL and other applications such as C, FORTRAN, Matlab:

<http://cimss.ssec.wisc.edu/~gumley/binarytools.html>

For a more general and flexible solution, use netCDF as Paul recommended.

Cheers,
Liam.

Subject: Re: Writing large [x,x,x,x] files

Posted by [Craig Markwardt](#) on Fri, 09 Mar 2001 23:06:04 GMT

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"Sean Heukels" <sean77=cuthere=@dds.nl> writes:

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> wouldn't mind having some other more common format

I'll chime in.

Astronomy folks use FITS for data exchange, but other people can too.

I know that a lot of people complain that FITS is archaic but it's pretty effective, especially with the excellent packages in the IDL Astronomy Library. For example:

To save the data

```
x = findgen(3,4,5)
```

```
fxhmake, header, x
```

```
fxaddpar, header, 'COMMENT', 'This data contains bogus values on June 3'
```

```
fxwrite, 'myfile.fits', header, x
```

To read the data later

```
fxread, 'myfile.fits', y
```

The cool thing about FITS files is that the header is written in ASCII text so any editor can look at it.

Another option is to use IDL SAVE files, which are native to IDL. IDL has enough to save and later read the data. With my additional SAVE library you can selectively restore data, or just find out what's inside the file by making a listing.

To save the data:

```
comment = 'This data contains bogus values on June 3'  
save, x, comment, file='myfile.sav'
```

To read the data:

```
restore, 'myfile.sav'
```

To selectively restore X only (using my SAVE library):

```
cmrestore, x, 'myfile.sav'
```

Good luck,

Craig

P.S. My CMSVLIB library is here:

<http://cow.physics.wisc.edu/~craigm/idl/idl.html> (under Save Files)

--

Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response

Subject: Re: Writing large [x,x,x,x] files

Posted by [Martin Schultz](#) on Mon, 19 Mar 2001 15:31:06 GMT

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Craig Markwardt wrote:

```
>  
>  
> I'll chime in.  
>  
> Astronomy folks use FITS for data exchange, but other people can too.  
> I know that a lot of people complain that FITS is archaic but it's  
> pretty effective,
```

Oh let me advocate GRIB, a format commonly used by meteorological agencies (and established as standard by the WMO). It's archaic, it has a complicated user interface, but it is effective in packing data. And, most wonderful of all: if you would go for it, we would finally get a nice interface to read and write GRIB files from IDL ;-)
[without call_external, i.e.]

Cheers,

Don't-take-me-serious-Martin

PS: The fact that there are no GRIB utilities available in any library that I know of shows that not too many met people are using IDL. Or is everyone happy with the wgrib solution??

--

```

[[ Dr. Martin Schultz  Max-Planck-Institut fuer Meteorologie  [[
[[      Bundesstr. 55, 20146 Hamburg      [[
[[      phone: +49 40 41173-308      [[
[[      fax: +49 40 41173-298      [[
[[ martin.schultz@dkrz.de      [[
[[

```

Subject: Re: Writing large [x,x,x,x] files

Posted by [Paul van Delst](#) on Mon, 19 Mar 2001 16:49:08 GMT

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Martin Schultz wrote:

>

> Craig Markwardt wrote:

>>

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>> I'll chime in.

>>

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> Oh let me advocate GRIB, a format commonly used by meteorological

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> Cheers,

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> Don't-take-me-serious-Martin

>

> PS: The fact that there are no GRIB utilities available in any library

> that I know of shows that not too many met people are using IDL. Or is

> everyone happy with the wgrib solution??

I convert GRIB->netCDF and read the latter in IDL (and other) code. :o)

(<http://www.unidata.ucar.edu/packages/decoders>)

Disk space nowadays is cheap enough and readily available - packing data to save space is usually more trouble than it's worth (unless you're dealing with GB->TB/day from, say, satellite instruments). If your internet connection is too slow and your data absolutely, positively has to be there overnight - Fedex a DAT tape. :o)

paulv

--

Paul van Delst A little learning is a dangerous thing;
CIMSS @ NOAA/NCEP Drink deep, or taste not the Pierian spring;
Ph: (301)763-8000 x7274 There shallow draughts intoxicate the brain,
Fax:(301)763-8545 And drinking largely sobers us again.
paul.vandelst@noaa.gov Alexander Pope.
