
Subject: Re: HDF, netCDF, etc question
Posted by [R.Bauer](#) on Sun, 08 Jul 2001 16:31:58 GMT
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ronn kling wrote:

>
> Hi All,
>
> Which format would be best for a large number of large sequential images
> along with ancillary data such as field of view, exposure time, etc?
> Discrimators would be things like speed in reading them in, ease to pull out
> the images and information.
>
> I don't have a lot of experience with these things so any and all opinions
> are welcomed.
>
> Thanks,
> Ronn
>

Dear Ronn,

we have a lot of experience by netCDF and HDF (SD). Both you can use up to 8 dimensions for data and you can store several ancillary data like attributes or parameters.

We have routines reading whole datasets or subsets which are able to concatenate files during reading by a dimension name. (The next version of our library will be published soon)

An example of our data structure is shown below. The tags what's in the structure are defined and what's written to a file is given from a definition file. In the example it's def_icg. You can define your own definitions and submit your definitions by a keyword to each routine.

Most of our files have something between 2 MB and 200MB. A small amount of files exceeds 700 MB. At the moment I am using only the SD interface from HDF. So I have no experience for the image interface. But this should not be very complicated.

best regards
Reimar

--

This template was created by write_icgspro.

PRO ronn

```
. *****  
;  
; CALLED BY:  
;  
;  
write_icgspro,'ronn.pro',/small,/status,short=['time','LAT','LON','O3']  
. *****  
;
```

```
extra= { $  
    SHORT:['time',$  
        'LAT',$  
        'LON',$  
        'O3'],$  
    SMALL: 1,$  
    STATUS: 1 $  
}
```

struct=gen_icgs(_extra=extra)

```
. *****  
;  
; FILL IN YOUR DATA  
;  
. *****  
;
```

```
*STRUCT.!GLOBAL.!DEF.FILE='/usr/local/icg/icg/idl_source/idl_links/def_icg.pro'  
*STRUCT.!GLOBAL.!DEF.TIME='2001-06-29 06:00:30'  
*STRUCT.!GLOBAL.PI.NAME='R.Kling'  
*STRUCT.!GLOBAL.PI.ORGANISATION='KRS, inc.'  
*STRUCT.!GLOBAL.DATASET.TITLE='Test data interface'  
*STRUCT.!GLOBAL.DATASET.DATA_CATEGORY='EXPERIMENT'  
*STRUCT.!GLOBAL.DATASET.EXPERIMENT='RK-Test1'  
*STRUCT.!GLOBAL.DATASET.TYPE_OF_DATA='SIMULATION'  
*STRUCT.!GLOBAL.PLATFORM.TYPE='COMPUTER'  
*STRUCT.TIME.UNITS='seconds since 2000-01-01 00:00:00 UTC'  
*STRUCT.TIME.LONG_NAME='time'  
*STRUCT.TIME.FILL_VALUE='UNDEFINED'  
*STRUCT.TIME.FLAG='NONE'  
*STRUCT.TIME.PARAM=dindgen(10)  
*STRUCT.TIME.STATUS.DIM.NAME='time'
```

```

*STRUCT.TIME.SHORT_NAME='time'

*STRUCT.LAT.UNITS='deg'
*STRUCT.LAT.LONG_NAME='longitude'
*STRUCT.LAT.FILL_VALUE= -999
*STRUCT.LAT.FLAG='NONE'
*STRUCT.LAT.PARAM=findgen(4)
*STRUCT.LAT.STATUS.DIM.NAME='LAT'
*STRUCT.LAT.SHORT_NAME='LAT'

*STRUCT.LON.UNITS='deg'
*STRUCT.LON.LONG_NAME='LONGITUDE'
*STRUCT.LON.FILL_VALUE= -999
*STRUCT.LON.FLAG='NONE'
*STRUCT.LON.PARAM=findgen(5)
*STRUCT.LON.STATUS.DIM.NAME='LON'
*STRUCT.LON.SHORT_NAME='LON'

*STRUCT.O3.UNITS='ppm'
*STRUCT.O3.LONG_NAME='mixing ratio'
*STRUCT.O3.FILL_VALUE= -999
*STRUCT.O3.FLAG='NONE'
*STRUCT.O3.PARAM=findgen(4,5,10)
*STRUCT.O3.STATUS.DIM.NAME=['LAT','LON','time']
*STRUCT.O3.SHORT_NAME='O3'

. *****
;
; FILL IN YOUR COMMANDS
; e.g.
; struct=chk_struct(struct) ; to remove UNDEFINED attributes
;
; Write a netCDF-File:
; write_ncdf,'file.nc',struct ; /ignore_test ; /remove_previous ;
/overwrite
;
;
; Write a HDF-File:
; write_hdf,'file.hdf',struct ; /ignore_test ; /remove_previous ;
/overwrite
;
; Write an ENZ-FILE:
; struct=ptr_struct2struct(struct,/free) ; to convert a ptr_struct
into a normal structure
; write_enz,'file.enz',struct
. *****
;

free_ptr_struct,struct

```

END

> --
> Ronn Kling
> KRS, inc.
> email: ronn@rlkling.com
> "Application Development with IDL" programming book updated for IDL5.4!
> "Calling C from IDL, Using DLM's to extend your IDL code" NEW BOOK!
> Shareware and Freeware at: <http://www.rlkling.com/>

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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.html

<http://www.fz-juelich.de/zb/text/publikation/juel3786.html>

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read something about linux / windows
<http://www.suse.de/de/news/hotnews/MS.html>
