Subject: dlm returning ptr array and string array
Posted by R.Bauer on Mon, 03 Mar 2003 10:26:29 GMT
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Hi,

I started a bit in dlm programming. Because of the latest bug in implementing the netCDF library I have to think in this case about getting more independent from rsi.

If they are able to fix it sooner as I am able to program my own netCDF dlm routines then I will save this idea for further usasge.

As you know many of our data access and analysing routines are based on a structure (icg data structure)
This is a structure in many struct levels which are not named. The reason is only tags which are really necessary should be every time included. If someone likes to give more information to his data this should be included into the structure too (e.g. stdev or quality flags).

For example if someones data has a unit, a long_name the structure looks for example:

```
struct.time.units      =  'seconds since 2000-01-01 00:00:00 UTC'
struct.time.long_name  =  'time'
struct.time.param      =  [ .....]
struct.time.short_name =  'time'

struct.o3.units        =  'ppm'
struct.o3.long_name    =  'mixing ratio'
struct.o3.param        =  [ .....]
struct.o3.short_name   =  'O3'
```

Some other tags describes something about the dataset itselfs this is stored in a main level structure for example pi or experiment information,

```
struct.!global.pi.name            = 'M.Mustermann'
struct.!global.dataset.experiment = 'myex'
struct.!global.platform,type      = 'AIRCRAFT'
```

and possible others.

(There are more than 100 other definitions of tags sometimes useful)

I am quite sure it is not easy to get a structure like this returned from a dlm. But I think an other way should be possible.

As some of you know we have some routines which are able to add or change tags and parameters on each level of a given structure.
This is possible because we got the idea to build from a structure a vector of strings and a vector of pointers to the data.
For deleting a tag this means for example to remove an index from both vectors and to free this pointer. Then both vectors are used as input to a function returning the structure.

Now my questions:
Is it possible to return a pointer vector by a dlm?
Could they freed by idl?
Is this mostly stable?
Does it give memory leakage?
Are there memory limitiations generally using dlms?

regards

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