

Interactive comment on “NCIO 1.0: a simple Fortran NetCDF interface” by A. Robinson and M. Perrette

Anonymous Referee #1

Received and published: 26 March 2015

General comments

It's a good idea to provide a library that will make netcdf IO in fortran easier, even at the cost of performance (at least for prototyping).

The paper is fairly easy to read. It was very useful to be able to read the fortran example provided on github (test_ncio.f90), so it would probably be a good idea mention the github repository at the beginning of the paper and also include a "Download" section on github page to help novice users download the code

eg git clone <https://github.com/alex-robinson/ncio.git>

Other comments

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line 25: the paper should mention the CMOR (Climate Model Output Rewriter) library

<http://www2-pcmdi.llnl.gov/cmor>

and the CF (Climate and Forecast) conventions

<http://cfconventions.org/>

Explicitly mentioning CF will also make it clearer for some people why you are using the `long_name/standard_name/...` attributes later. Are you speaking about CF on page 304 when you mention "convention attributes"?

line 23: there should be some more explanation about why and when some people have to use `nc_write_map`. Is it something you need when using dimensions defined in km?

There should be a note about the use of the extended dimension and how, for instance, the time axis can be extended with repeated calls to `nc_write`. `test_ncio.f90` uses the `unlimited=TRUE` parameter in `nc_write_dim`, but the documentation of `nc_write_dim` on page 315 does NOT mention this useful parameter

The paper does not mention if the library will work with `netcdf3` or `netcdf4`

The paper does not mention at all how the errors are handled.

What happens if you try to `nc_create` on an existing file? Do you get an error or will the existing file be erased?

It is a limitation (an acceptable limitation) to be able to only read and write string attributes. It could be a good idea to use a more explicit name for the functions

`nc_read_attr => nc_read_str_attr`

`nc_write_attr => nc_write_str_attr`

The tables describing the function calls mix input and output parameters and do not explicitly list the allowed types. This should be improved

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e.g, p 311, nc_read_attr

value (OUT) value of the STRING attribute to be read

Typos =====

page 302, line 4, cUmbersome, "module NCIO" -> "NCIO module"

line 11, revolutionized?

line 23, common TASKS?

page 303, line 5, NCIO module

line 9, hopes->hope?

line 20, analOgous?

line 21, "the subroutine will read all the variable"?

page 304, line 13, "like with"?

page 305, line 12, "be prepared" => "be ready"?

line 17, exCeption

page 306, line 15, to A file

line 27, use the correct "ff" in "affect"

page 307 and 308, it would be nice to rewrite a bit the "Conclusion" (revert a bit the order of some sentences?)

p 310, specify in another way that nc_size returns an integer.

p 313, varname, "name of the variable the attribute should be associated to"

p 315, add the "unlimited" parameter

p 316, remove "fortran data type of" for the 'dat' parameter

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Interactive comment on Geosci. Model Dev. Discuss., 8, 301, 2015.

GMDD

8, C269–C272, 2015

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