Geoscientific
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Interactive comment on "NCIO 1.0: a simple Fortran NetCDF interface" *by* A. Robinson and M. Perrette

A. Robinson and M. Perrette

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We would like to thank the reviewer for helpful comments and suggestions. Please find our responses to individual comments below in bold. The corresponding changes to the manuscript are highlighted with orange text in the supplement.

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, 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

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We have added information about the github repository in the abstract, as well as separated the section in the Discussion concerning how to obtain the code. There is a direct download link available on the Github repository, so we have not added additional information on that page.

Other comments

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"? **We have added a specific reference to CMOR and CF. "conventions attributes" was a typo, this has been changed just to "typical 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? **Additional text has been added. Indeed the map definition is related to using a regional projection as opposed to a latlon grid.**

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 **This has been clarified in the revised manuscript, thank you for pointing this out.**

The paper does not mention if the library will work with netcdf3 or netcdf4 **We have added an argument to the nc_create function to allow the user to choose between writing in the netcdf3 or netcdf4 format, as well as to specify whether previous files should be overwritten.**

The paper does not mention at all how the errors are handled. **We have added a**

sentence to the revised text. Basically ncio outputs the native NetCDF error and stops the program.

What happens if you try to nc_create on an existing file? Do you get an error or will the existing file be erased? **The existing file will be erased by default. We have added an argument to nc_create to allow the user to modify this behavior.**

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 **This function has been modified – it is now possible to write and read attributes as strings or numeric values.**

The tables describing the function calls mix input and output parameters and do not explicitly list the allowed types. This should be improved e.g, p 311, nc_read_attr value (OUT) value of the STRING attribute to be read **This is a good suggestion, and we have added a clear "OUTPUT:" phrase where appropriate.**

Typos ===== page 302, line 4, cUmbersome, "module NCIO" -> "NCIO module" **Done.**

line 11, revolutionized? **This seems clear to us.**

line 23, common TASKS? **Done.**

page 303, line 5, NCIO module **Done.**

line 9, hopes->hope? **Done.**

line 20, analOgous? **Done.**

line 21, "the subroutine will read all the variable"? **We could not find what this comment refers to.**

page 304, line 13, "like with"? **Changed to "as with".**

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

line 17, exception **Done.**

page 306, line 15, to A file **Done.**

line 27, use the correct "ff" in "affect" **This comment is not clear to us.**

page 307 and 308, it would be nice to rewrite a bit the "Conclusion" (revert a bit the order of some sentences?) **On this point, we have to disagree, although it is arguably a small concern.**

p 310, specify in another way that nc_size returns an integer. **We have added the "OUTPUT:" text here as well.**

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

p 315, add the "unlimited" parameter **Done.**

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

Please also note the supplement to this comment:
http://www.geosci-model-dev-discuss.net/8/C1066/2015/gmdd-8-C1066-2015-supplement.pdf

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