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Geoscientific Model Development Discussions

Interactive comment on "The infrastructure MESSy submodels GRID (v1.0) and IMPORT (v1.0)" *by* A. Kerkweg and P. Jöckel

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This paper describes a new component of the MESSy model that aims at improving the reading and preprocessing of gridded data by ensuring a single entry point and offering common grid processing functionality. This topic is very relevant to the users of MESSy and could also be of interest to others models dealing with gridded data. Unfortunately, the paper suffers from several major flaws.

First, it requires English editing and specially for the first half that is sometimes a little hard to understand (for example the introduction on page 8609). Some of the vocabulary is a little surprising (on page 8610, line 18, what is an "abstract time series"?). The paper also relies heavily on concepts, vocabulary as well as acronyms of the MESSy community making it quite obscure outside this community (see for example page 8623 or the lack of even a brief definition of what MESSy is). Quite a few of these acronyms

are defined in the text, but not all and generally after being introduced. Overall, the paper lacks clarity.

The paper also lacks structure: some details are given in what should be the general introduction to a new section while important concepts of the general infrastructure are not provided until several paragraphs after being first used (for example the NREGRID and SCRIP third party modules are mentioned multiple times on pages 8609, 8610, 8611 and finally briefly defined on page 8612 but without enough details to show what are the key differences between the two). Some sections should be merged together (the introduction to section 3 is mostly a rephrase of things written previously, the whole section 4 should be condensed in a few sentences and merged into the introduction). On the other hand, some details are missing: for example the programing language that has been used is not even mentioned.

The vocabulary is also not very consistent with different names for the same ideas in different sections ("grid routines" vs "mapping routines" vs "mapping algorithms" for example) and not defined when this would be needed (what does this mapping means? Is it not a reprojection of the grid? This is not very clear outside this community).

Finally, this paper fails to demonstrate the originality of the work. The results that are presented have actually been produced by third party modules and it seems that the work presented here mostly consists of a wrapper around these modules that fully perform the heavy duty processing. Moreover, these third party modules were already used in the past by MESSy (although it is now done in a cleaner way). if this is not the case, the authors should clearly explain it and show actual scientific content and results of their own work. Therefore, althought some explanations about how to use this new module are given (that are obviously only relevant to the users of this new submodel), the paper does not bring any usable information or new knowledge to the scientific community. The authors also fail to present their work in a way that would be less dependent on MESSy, therefore restricting the applicability of their work. This is exemplified by the figures 1 and 4 that mostly show how MESSy has been restructured

instead of showing how the generic pre-processing of gridded data has been improved by their approach. Outside the MESSy community, these figures are not very helpful.

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