

## ***Interactive comment on “Improving climate model coupling through a complete mesh representation: a case study with E3SM (v1) and MOAB (v5.x)” by Vijay S. Mahadevan et al.***

**Redler**

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Received and published: 28 November 2018

Dear authors,

in your paper you emphasise the software need for being able to perform an efficient, scalable and parallel online neighbourhood search between source and target grids. In your introduction you discuss the state of the art and mention ESMF and OASIS3-MCT. You argue that these tools are not really suited or are not used in the above mentioned online mode. In this context I am missing a discussion of

Liu et al., C-Coupler2: a flexible and user-friendly community coupler for

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model coupling and nesting Geosci. Model Dev., 11, 3557-3586, 2018  
<https://doi.org/10.5194/gmd-11-3557-2018>

and

Hanke et al., YAC 1.2.0: new aspects for coupling software in Earth system modelling  
Geosci. Model Dev., 9, 2755-2769, 2016 <https://doi.org/10.5194/gmd-9-2755-2016>

Both software products are designed to perform a parallel online search at runtime, and I think that both software tools are already used in this mode in the daily operation of the respective coupled modelling efforts – at least I can confirm that this is the case for YAC within ICON (see e.g. <https://mpimet.mpg.de/en/science/projects/integrated-activities>)

In my opinion it will be helpful if you can tell us as readers how your effort is related to the above mentioned publications and where your effort is superior to the above, last but not least as they both appeared in the same journal.

Sincerely,

Rene Redler

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Interactive comment on Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2018-280>,  
2018.

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