

Interactive comment on “A new distributed algorithm for routing network generation in model coupling and its evaluation based on C-Coupler2” by Hao Yu et al.

Li Liu

liuli-cess@tsinghua.edu.cn

Received and published: 29 April 2020

Dear Mr. Moritz Hanke,

Thanks a lot for your new comments and suggestions, which will help us further improve the manuscript and the code implementation.

In the following, we'd like to give responses to your comments and suggestions.

1. Regarding the meaning of “collective communication”.

RESPONSE: You are right that collective communication includes operations like reduction, barrier or alltoall, besides gather and broadcast. We should directly use broad-

C1

cast for correction rather than collective communication. The manuscript will be modified accordingly.

2. On the sorting algorithm.

RESPONSE: We agree that our sorting algorithm can be viewed as an optimized implementation of collective alltoallv (using Brook's algorithm) specifically for routing network generation. We have improved the code for only sending the data that is actually required by the receiving process. The manuscript will be modified accordingly. Thanks a lot for your suggestion.

3. About the focus of the manuscript.

RESPONSE: We agree that the “new” “algorithm” throughout the manuscript does not match the contribution of this work. We will improve the title, abstract and some contents (including Figure 3) when revising the manuscript.

Thanks a lot for the suggestion about evaluation. We can further evaluate the impact of router initialisation on the overall initialisation of a coupler, and can also involve MCT for this test, when revising the manuscript.

Best regards,

Li

Interactive comment on Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2020-91>, 2020.