

## ***Interactive comment on “A Global Geographic Grid System for Visualizing Bathymetry” by Colin Ware et al.***

**Anonymous Referee #1**

Received and published: 27 April 2020

Review for Geoscientific Instrumentation, Methods and Data Systems MS No.: gi-2020-1

Dear Authors dear Editor The manuscript A Global Geographic Grid System for Visualizing Bathymetry by Colin Ware, Larry Mayer, Paul Johnson, Martin Jakobsson, Vicki Ferrini introduces a global geographic grid system designed for the Seabed 2030 project. As stated on page five lines 126 to 128, the presented approach combines a geographic grid with a quadtree hierarchy. By doing so, the entire globe can be represented in one geographic scheme but avoiding the extreme oversampling towards the poles. Beyond the scope of seabed 2030, the manuscript introduces a metagrid concept necessary to generally standardise multi-resolution grids for global bathymetric application. In my opinion, the presented approach is well though and well argued. As

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such, it addresses problems inherent for bathymetry where incoherent data coverage is common. The implementation chapter also illustrates the approach from a computing perspective. (Due to limited knowledge, I cannot asses this chapter in depth.) Moreover, the conclusions, in addition to summarising the manuscript, gives an outline of wider applications of the Global Geographic Grid System. Given the relevance of the manuscript for handling and displaying geographic data of variable resolution (in particular bathymetric data) and the sound concept presented, I suggest the manuscript for publication with only minor modifications.

Remarks Minor remarks are provided in the commented pdf.

Best regards.

Please also note the supplement to this comment:

<https://www.geosci-instrum-method-data-syst-discuss.net/gi-2020-1/gi-2020-1-RC1-supplement.pdf>

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Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss.,  
<https://doi.org/10.5194/gi-2020-1, 2020>.