Solid Earth Discuss.,
https://doi.org/10.5194/se-2019-184-AC2, 2020

Solid Earth
Discussions

Interactive comment on "A review and evaluation of the methodology for digitising 2D fracture networks and topographic lineaments in GIS" *by* Romesh Palamakumbura et al.

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Received and published: 12 March 2020

Dear reviewer 2, thank you for your time and effort in reviewing our manuscript in open discussion for publication with solid earth. The two main issues that you raise are in regard to the novelty of the method and the usefulness of the method for the geological community. The novelty and usefulness of the method must be considered in terms of the intended audience of the paper. The manuscript describes a method that is not commonly used in applied geology communities an developing countries due to limited specialist knowledge and software. This manuscript presents a detailed breakdown of the technique, with particular emphasis on using open access software. The paper,

is not proposing a new method but providing and understanding of the pros and cons of digital fracture trace analysis, particularly for users outside of structural geological and particularly for users in developing countries. In introduction of the paper we provide a brief overview of outcrop-based 1D to 3D fracture network analysis, which is aimed as an introduction to the basic concepts around fracture network analysis for non-structural geologist and users working in a broad range of fields. However, we acknowledge that a basic summary of the various studies that have used this type of method as the basis for detailed fracture network analysis would be beneficial for the reader. We believe a short paragraph in the introduction that introduces these studies would be helpful. Further detailed discussion of these type of work is beyond the scope of this study. Regarding the usefulness of the technique, this is proven by the various studies that use it as the basis of more evolved fracture network analysis in the references provided for the suggested method background section. Hence, the examples provided demonstrate in detail how the method can improve the data collection process for a wide range of users, including engineering geologist, geomorphology and for groundwater modelling.

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