

Peer Review Report

Review Report on Enhancing the Digital Earth via digital decimal geolocation and the FAIR data principles

Review, Earth Sci. Syst. Soc.

Reviewer: Alastair Ruffell

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EVALUATION

Q 1 Please summarize the main theme of the review.

The main theme of the review is to draw out, from an end-user's perspective, the main messages here, whilst keeping but diminishing some of the distractions from the overall aim of advocating the dLL system.

Q 2 Please highlight the limitations and strengths.

The limitations are also the strengths here, in that the two case studies that really struck me were 6.2 (Rock Glacier), 6.3 (Landslide Mapping) and the section on Mars in Part 7.

I think 6.2 and 6.3 should be kept as they are, possibly with stronger words on the consequences of mis-communicating positional data. I also think the Martian example should have a separate sub-heading. Why Mars? I think that the mess we have gotten into with geolocation (nicely demonstrated with the summary of lat/longs and What3Words) is historic, yet with Mars (and other planets) we have the chance to try and get this more accurate from the start – and then use these examples with minimal historic precedence to revise the Earth situation.

A further point to strengthen, which is in here but somewhat hidden, is where use of dLL solves a problem: the issues of location in the case studies are fine, but it needs to be stressed clearly how dLL would have solved these issues.

It is a shame, but I think that some of the other examples, whilst of great interest, maybe distract the reader from what I see (above) as clear examples of the failings of current mixed systems and advantages of a FAIR dLL system. I am loathe to suggest deletion of (for example) sections 8 and 9 – but perhaps these can be reduced down? another option is to find yet more, tangential examples and have sections 8, 9 along with other examples where the need for unified geolocation is needed in a single-page table, with key references? I am thinking military, accident investigation, wildlife monitoring for example – they must face the same problem?

Q 3 Does the review include a balanced, comprehensive and critical view of the research area?

Yes – there are contentious elements for sure in some of the case studies, but they are not unduly accusatory

Q 4 Check List

Is the English language of sufficient quality?

Yes.

Is the quality of the figures and/or tables satisfactory?

Yes.

Does this manuscript refer predominantly to published research? (unpublished or original research is non-standard for a review article, and should be properly contextualised by the author)

Yes.

Does the manuscript cover the topic in an objective and analytical manner

Yes.

Does the reference list cover the relevant literature adequately and in an unbiased manner?

Yes.

Does the manuscript include recent developments?

Yes.

Does the review add new insights to the scholarly literature with respect to previously published reviews?

Yes.

Q 5 Please provide your detailed review report to the editor and authors (including any comments on the Q4 Check List):

Most detailed comments are in Q2.

The work needs a thorough edit, as some fragments of sentences occur, for example, Page 10, line 307 "techniques, often allied to machine learning, has However, Figure 5 suggests that the variance of the" - these will come out in the revisions suggested (above).

Page limits in the volume may benefit from Editorial input on comments in Q2, as to the most relevant aspects of this submission to the volume - whilst keeping my overall wish for this work, which is clear and unequivocal messaging of the problems (as in the case studies mentioned), and opportunities.

QUALITY ASSESSMENT

Q 6 Quality of generalization and summary



Q 7 Significance to the field



Q 8 Interest to a general audience



Q 9 Quality of the writing

