

## ***Interactive comment on “Method and application of using unmanned aerial vehicle for emergency investigation of single geo-hazard” by Haifeng Huang et al.***

### **Anonymous Referee #2**

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#### General advice:

This paper aims to describe a RPAS and processing pipeline specifically developed for the management of small hazard events. Authors discuss both the platform/sensor technology and the main steps followed during the complete UAV mission workflow. Finally, performance evaluation is carried out on three test cases. Although the core concept is interesting and may represent an interesting issue for the scientific community, several main issues should be addressed by the authors.

#### Major Comments:

1.General remark: the English is very poor and this may prevent a full comprehension

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of the paper. Photogrammetry-related terminology is vague and often incorrect (e.g. “high-definition photos”, “...for the photos, the definition, scope and overlap rate...”, “planar digital terrain”, etc...). A proofreading by a native English speaker conversant with photogrammetric terminology is strongly required.

2.The scientific significance and novelty of the paper should be proved. Which are the advantages of the developed platform/sensor/pipeline compared to other commercial or in-house developed systems? The literature review addresses only general concepts and does not show the novelty and advantages of the newly developed system.

3.The application field is vague. Authors say that the RPAS is developed for emergency investigation of “single” geo-hazards. What do you mean with the term “single”? If it refers to a limited spatial extension of the natural hazard, this should be better clarify and a clear idea of the intended area size should be given.

4.No accuracy figures are given. Authors generally refer to “meter-level error” or “centimeter- even millimeter- level accuracy”. How did you evaluate accuracy? Did you adopt Control Points to check the accuracy of orientation results? Did you evaluate the accuracy of the final product? Although accuracy is not the main aim of rapid mapping, a metric evaluation of the methodology is necessary to confirm and support the conclusions.

5.Why is direct geo-referencing not dealt with?

6.The experimental part is very poor. No details are given regarding the image dataset (GSD?), the accuracy achieved, the time required. This gives limited support to the conclusion drawn by the authors.

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