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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Brief Communication "The use of UAV in rock fall emergency scenario"" *by* D. Giordan et al.

Anonymous Referee #1

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As somebody frustrated with media coverage of UAS relegated mainly to surveillance and package delivery, this manuscript was a refreshing read. For the most part, the paper reads well, and does a great job conveying how UAS can be a valid survey tool. I was dissapointed however, in the use of the word 'drone' as this is a term that advocates for UAS stay away from due to the negative image it connotes. I was also disappointed in the misuse of terms within the manuscription, along with some very import terms never even brought up. These I will cover in my specific comments below. Despite needing to fix these issues, the overall message of the paper is very good, and should provide a great foundation for others to add upon as research related to the practical applications of UAS in the geomorphic realm continues to build.

To build upon the specifics of the terminology, I must point out the geocoding involves

matching something such as an address to a set of coordinates, not providing an image with a set of geographic coordinates. The term the authors are looking for here is 'geotagging'. Beyond that, I still am not sure if the authors performed a georeferencing operation, or an orthorectification of their image. From what I can tell, since you generated a point-cloud DSM with the imagery gathered, and then use both the GCPS and the DSM, you performed an orthorectification. I can't tell because nowhere in the manuscript was point cloud generation described (only mentioned in passing), nor was the percent overlap of the imagery. The details behind this are very important to the methods section. The reader will also want to know the speed/specs of the computer the processing was performed upon, as the authors likely know that crunching all the data requires a decent amount of processing power. Finally, for the GCPs, I want to know how the TS was tied into cordinates on the ground. Was a survey grade (dual frequency) GPS used to site the TS? The authors described in high detail the pixel resolution, but not much on the spatial resolution of the GCPs. To summarize, I think some tweaks need to be made for this paper to hold weight.

Here are some technicals I came across: P 4012 L13 Generally, rock falls size ranges..... I would change to rock fall or reword sentence.

P 4013 L19 This last sentence needs commas or rewording. Also, as I pointed out earlier, I don't think you georeferenced...you orthorectified. I say this because georeference does not use z values, which you did use with the point cloud you generated.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 2, 4011, 2014.