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Ocean Science
Discussions

Interactive comment on "A new 3-D-modelling method to extract subtransect dimensions from underwater videos" *by* L. Fillinger and T. Funke

Anonymous Referee #3

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Due to my opinion the paper gives an interesting highlight on 3D-modelling of seafloor transects from still/video images by the use of software.

However, this has done before. Thus, it would be desireable to be a little more detailed in the alorithmic background. Giving the reader a little more of this information it helps him to understand the challenges of this type of modelling a little better. Especially the problem of identifying appropriate TrackPoint/SmartPoints from burred/distorted images in uncharted water clarities. I think this could improve the paper and make it a useful guide for other researchers planning their video transects.

Another thing that is also mentioned in the discussion is the fact that this analysis is time consuming. It might be good to give the reader/researcher some information about the 'quantity of time-consuming'. The required (wo)man-power is an interesting part for

others being interested in the method, as well as your assessment of a cost/benefit analysis.

Nevertheless this paper is surely worth to be published. Good luck with it and I hope my comments help to make it even a little better. Fine work!

Some minor comments (p -> page, l -> line): - p3884, l18: maybe 'seafloor' instead of bottom?

- p3885-3886: you should change the way you give the resolution of the cameras. 720 576 px might be understandable. However it took me a third look to see that 19 201 080px (in my print) is obviously the HD resolution. Maybe it is better to write '1920x1080 px'.

- p3885-3886: For a couple of applications and understanding the image quality (different types of distortion, exposure, vignetting, modular transfer function, etc.) it might be interesting to list the used camera lens, focal length, shutter speed (if given by the video system) and file formats used during the processing steps (lossless formats or compression artefacts?).

- p3886, l20: Just for completeness -> For Dive A&B the cruise/campaign/expedition was named. This information is missing here.

- p3891, l5 and others: You spend a much work on correlation work. I think this is a very valuable part of your paper. However, I think that these features should be discussed in more detail in the Discussion section and give some more 'derived conclusions' for future work.

- p3893, l15: 'apart' from what? This should be a little more precise.

- p3897, l18: 'when' ? Maybe it is good to spilt the sentence; this one is very long.

- p3898, l15-16: In my opinion the supplementary data should not be listed in the Acknowledgement section. It is an important part of your work. I think it is better to list

it in the Method section.

You are using a lot of abbreviations. For users/readers not familiar with these abbreviation it might be good to re-introduce the abbreviation every new section (Introduction, Methods, Results, Discussion) and not to use them in headings (e.g. 2.2.2; p3889, l16).

There are some small things like missing commas (e.g. p3894, l20 'However, '), etc. Maybe you could have a second iteration loop for that or ask a native speaker (you have at least one on your institute floor, listed in the Acknowledgement section ;-)

Interactive comment on Ocean Sci. Discuss., 9, 3879, 2012.