Interactive
Comment

Interactive comment on "LAPM: a tool for underwater Large-Area Photo-Mosaicking" *by* Y. Marcon et al.

Anonymous Referee #1

Received and published: 21 May 2013

General Comments: This paper presents a new tool for end-user scientists to cre-ate large-area photo-mosaics. While software for this purpose has existed for many years, including at least one that utilizes GUIs, this software seems to provide an excellent level of flexibility and end-user control over the construction of large-area photo-mosaics. By carefully explaining the process of photo-mosaicking and relating the construction of the photo-mosaic to the options and control on the part of the end user, it is clear that this will be a useful tool for many scientists to evaluate deep sea environments using well-made photo-mosaics. My comments are largely structured around organization, phrasing and some confusing points. Generally, these comments are minor and technical in nature. The paper proposes software that will be very useful in creating useful photo-mosaics of these challenging environments, and I support the

publication of this paper.

Specific Comments: The paper is largely well-organized and clearly written. I have included several comments in the attached text of specific places where it would be helpful to have additional information. For example, while reference is made to the control that the end-user has over specific components of the process, it is not clear if the software pauses, and waits automatically while the end-user makes the changes, or if the software runs and after the mosaic is constructed, the end-user can investigate the various links or feature matches and make edits that would then require an additional construction stage. Also, how is the image and navigation data imported? These types of details would be useful to add.

Also, many of the sentences begin with very broad statements (any recent computer, an unlimited # of images...) that are later supported with figures and specific examples. It may be helpful to restructure those paragraphs to open with more concrete phrases and to link to the appropriate figures earlier. For example, the section explaining the crossover points should have visual support from Figure 7 earlier-perhaps switching Figure 5 with Figure 6 might help with this. Also, if the paper is intended to be read by potential end-users, there are points in the paper which are very technical (for example, the Global Registration section), and could use a re-edit if the intent is that this section be understood by a broader audience.

The figures help to support the text, but it would be better if all of the photo-mosaics had specific scale bars and short descriptions of where the pictures were obtained and what the photo-mosaics consist of, even if the purpose of the figure is to demonstrate a particular feature of the software. Specific comments are in the attached document.

Lastly, it would be helpful if the authors had a fluent English speaker do a final proofread of the paper – there are several awkward phrases and typos.

Technical Comments: Please see the attached document.

Please also note the supplement to this comment:
http://www.geosci-instrum-method-data-syst-discuss.net/3/C46/2013/gid-3-C46-2013-supplement.pdf

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Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., 3, 127, 2013.