Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2016-74-RC3, 2016 © Author(s) 2016. CC-BY 3.0 License.



## **HESSD**

Interactive comment

## Interactive comment on "Geomorphometric analysis of cave ceiling channels mapped with 3D terrestrial laser scanning" by M. Gallay et al.

## **Anonymous Referee #2**

Received and published: 18 March 2016

It seems as the author cannot read remarks in the highlighted text:

"Page 9 line 5: The highlighted text will be rephrased to: decimation of the mesh, or the mesh parameterization." - But it is the original text and the question was about method of decimation used.

"Page 9 line 23: The highlighted text will be rephrased to: Also, the ceiling channels were extracted as polylines by the means of traditional 2-D geomorphometry." - Shortening is OK (really you do not write about bottom channels in the next text) but the question was: what does mens the 'traditional 2-D geomorphometry'? Manual delimitation or any algorithm?

"Page 10 line 10: The highlighted text will be rephrased to: a normalized ceiling height (DEM\_CH\_NORM)" - OK that you want to add the tool for normalization. But the ques-

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tion was: 'Why higher altitudes influence least cost path algorithm?' (An explanation should be usefull)

"Page 10 line 13: The highlighted text will be rephrased to: The higher is the constant the smoother the line will be extracted." - It is again only a reformulation but I questioned your statement: If altitude of the cave is 340 m and you use the constant from the interval (0, -340) it is OK (e.g. 340 - 300 = 40 what can be equivalent to dune) but if you use constant e.g. -700 then 340 - 750 = -410 what is not equivalent to dune. So limitation of constant in relation to cave height is necessary.

"Page 14 line 30: The highlighted text will be rephrased to: the 26 channels" - But Only 25 is mentioned on page 10, line 31! So it is necessary to change the number here or on the page 10!

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2016-74, 2016.

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