

## ***Interactive comment on “Technical Note: Water flow routing on irregular meshes” by D. Bänninger***

### **Anonymous Referee #1**

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The manuscript presents a method for flux routing on irregular meshes. The approach uses triangle as the basis to develop an algorithm, which can be applicable in a number of land-surface models that use triangulated irregular networks to represent the domain of interest. The paper contains publishable material but still does not read well. Specific comments are provided below.

Everywhere: substitute “spatial explicit hydrological” with “spatially explicit hydrological”.

P 3676, L 2-3: “to its adjacent cell” refers to the “usual algorithms”

P 3676, L 24: “edged” needs to be “edge”

P 3676, L 26: “An other” needs to be “Another”

P 3677, L13: substitute “deepest” with “lowest”

P3678, L23: substitute “as follows” with “by using the following procedure”

P 3679, L2-4: if you take a projection of the normal vector to the plane to which it is perpendicular, you will get zero. Re-phrase.

P 3679, L 7: after “gradient” add “located in the plane of that triangle”

P 3679, L9-10: if you refer to  $g$ ,  $b$ , and  $\gamma$  in Figure 2, show them there.

P 3680, L9-11: badly written sentence, if you refer to the gravity driven flow, explain it better as “soil water matrix potential” has a broader meaning.

P3680, L23, don’t need “therefore”

P3681, L5 - 8: You should indicate that this is a qualitative statement, e.g. “as it can be qualitatively concluded”.

P3681, L 8-11: “qualitative comparison” ... “proved” ... “more powerful” cannot be used together. You can only prove that something is better by using appropriate quantitative metrics. Change formulation or eliminate the sentence.

P3682, L1: substitute the sentence with “Simulations indicate that the developed method is a suitable approach to flow routing on irregular meshes”.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 3, 3675, 2006.

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Discussion Paper