

Recall of nature hiking landmarks on account of sketch maps

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Abstract:

Many landmarks used for navigating in nature environment are indeterminate, ambiguous and inter-resembling by their visual appearance. Still, they may be clearly perceived and recalled by the hikers due to their locations or closer visual or non-visual details. Knowing how landmarks create the remembered human survey knowledge is a key element in understanding human spatial cognition as well as human conception and use of the physical nature environment. (Brosset et al. 2008, Kettunen 2014)

In order to support making more usable and useful navigation aids such as maps and navigation software for hikers, this study in progress aims at determining factors that make nature landmarks easy to recall and thus recognisable for hikers. The most readily recalled landmarks should be prioritized when selecting guidance landmarks for navigation applications. We investigate 22 sketch maps drawn by hikers of a 1,3 km route in a forested taiga terrain both in daylight and headlamp light in the night (Figure 1). We link the landmarks drawn on the sketch maps to landmarks GNSS-positioned in the terrain and analyse the locational distributions and characteristics of landmark recall along the route. We determine the most recalled individual landmarks and analyse the reasons of their memorability with the help of locational analysis as well as think-aloud recordings of the hikes. We compare the recall of individual landmarks to the distribution of overall recall counts of the previously defined landmark classes.

As for the landmark recall measured by the sketch maps, we hypothesize that:

- Landmarks are recalled in higher number and more accurately towards the end of the hiking route and close to the decision points of the route.
- The most recalled individual landmarks are characterised by uniqueness of their visual details.
- Continuous areal and linear features along the route form background landmarks that frame the recall of the structure of the route.
- The sketch maps and their depicted recall measures differ between the studied conditions of day and night.

More detailed methods, analysis and preliminary results of this ongoing study will be presented at the workshop.



Figure 1. An example of the studied sketch maps with denoted landmark classes (Kettunen 2014).

References

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