How should Orientation Maps look like?

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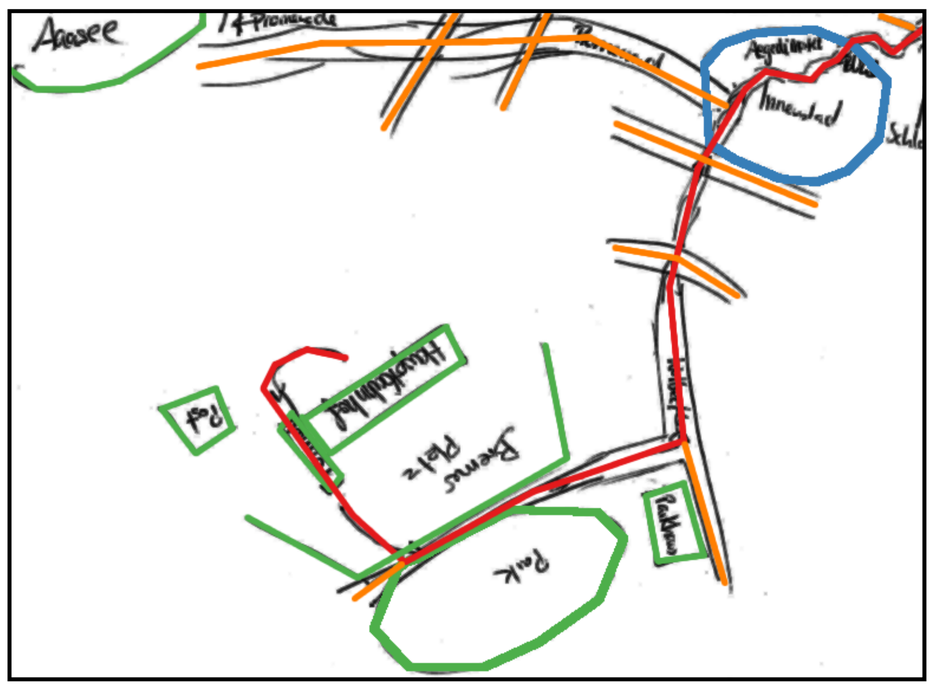
Background

Maps often lack to support the users' orientation when navigating in unfamiliar environments. Maps that are displayed on small screen devices cannot simultaneously display overview and detailed information. Orientation maps aim to support the user's spatial knowledge acquisition while navigating. The key challenge in the design of orientation maps for small screen devices is to select only relevant map features instead of simply reducing detailed map information with decreasing map scales.

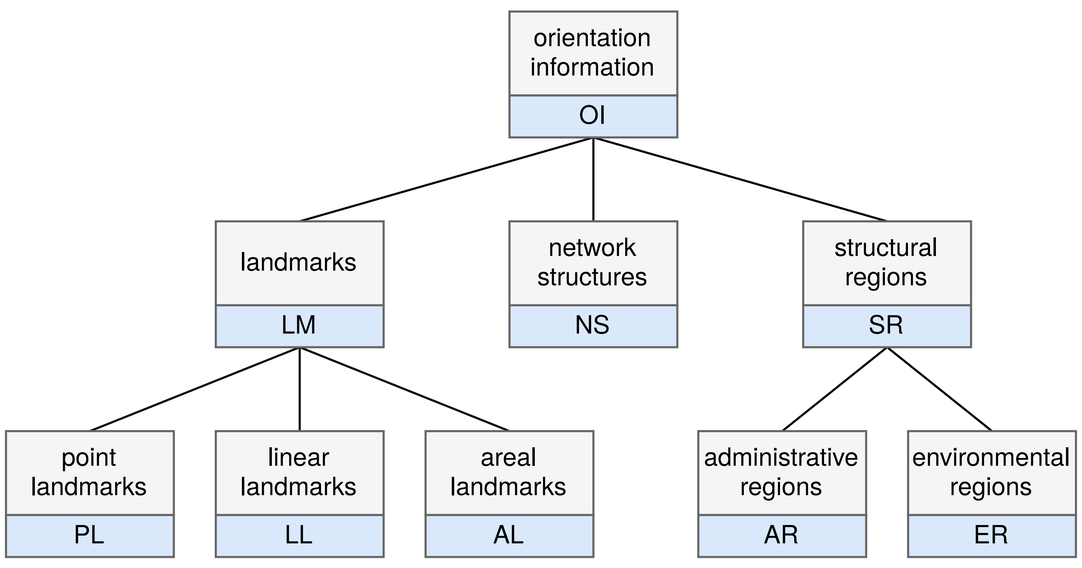
In order to successfully create orientation maps, maps have to be considered as a whole and all types of map features have to be investigated for their relevance to support spatial knowledge acquisition.

Approach

When drawing sketch maps, people include additional information to the route, which they consider as relevant for someone else to orient in a wayfinding situation. We analyzed several sketch maps to classify the features people include.



We developed a classification scheme for orientation information in wayfinding maps by classifying all types of features, without specifying their role (e.g. local or global) or location (e.g. at decision points). We argue that all features in orientation maps can be classified as *landmarks*, *network structures*, and *structural regions*.

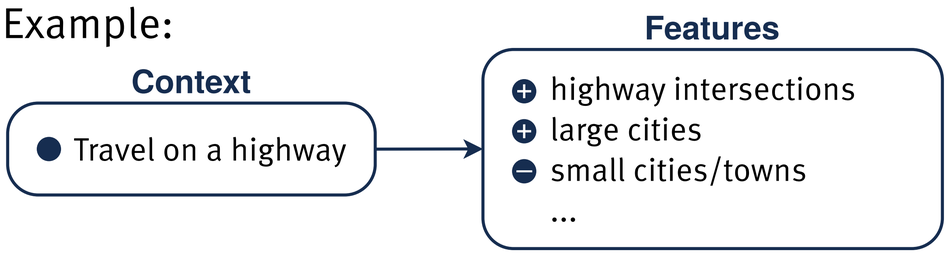


Feature Selection

When creating orientation maps we need to investigate following two questions, which approach the feature selection from two different sides:

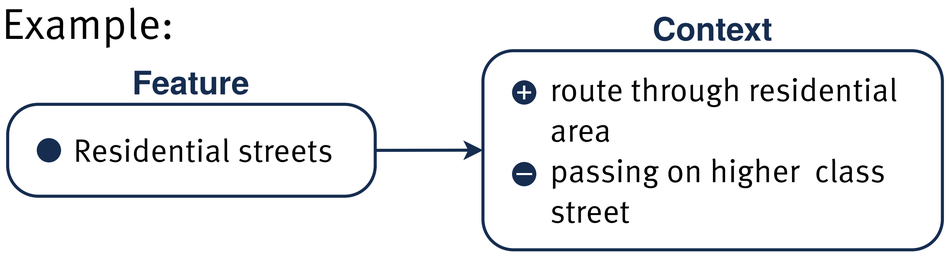
Which features are relevant for supporting orientation in a particular context?

Example:



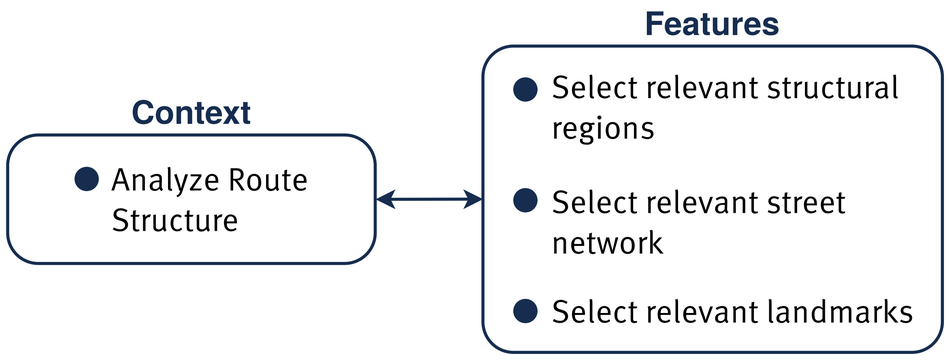
In which contexts are particular features relevant for supporting orientation?

Example:



Future Work

We aim to automatically select orientation information for wayfinding. We propose a workflow for an algorithm to automatically select relevant information for orientation maps.



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