

**Indoor Semantic Modelling for Routing
The Two-Level Routing Approach for Indoor Navigation**

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PROPOSITIONS

accompanying the dissertation

Indoor Semantic Modelling for Routing: The Two-Level Routing Approach for Indoor Navigation

by

Liu Liu

1. Indoor spatial data infrastructure is one of the most important components for indoor navigation, unfortunately now only separate prototypes are proposed and they are still far from a systematic solution (this thesis).
2. Routing criteria should be specified based on semantics of indoor spaces, and thus resulting paths become explainable to humans (this thesis).
3. The navigation network of two levels reflects human perception on different scales of indoor paths, which is not only about the exact path shape but also on conceptual paths (this thesis).
4. Indoor routing needs to support a variety of indoor paths on demand in addition to the shortest one (this thesis).
5. Though future work of a publication is always promising, it is hardly realized by the original authors but still inspiring to others and quite often realized by some of them.
6. Researchers should be encouraged to unveil more details of tools, test data, and development environments in their study (and make these available via public repositories, such as github), which can boost other peers to verify this work and continue its future work or other extensions.
7. GI Science is still on the way to be an independent science, where theories and approaches about Geo-Data and Geo-Processing are the cornerstone.
8. Doing research shares many common grounds with cooking in term of methodology. First determine the topic (dish), plan (the step-by-step recipe) and tools (ingredients); then execute the research plan in a correct order. Timing is everything; otherwise research would be messed up (overcooked). Afterwards, results will be assessed, just as the dish judged by consumers.
9. We are living in a golden era of integrated innovation where scientists of different disciplines have communicated and cooperated with each other more than ever.
10. In an advanced ‘smart city’, privacy is a luxury good.

These propositions are regarded as opposable and defensible, and have been approved
as such

by the promotor prof. dr. ir. P.J.M. van Oosterom