Final report 2018

Methods for identification of free navigable space

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Introduction

The research within this project is a part of four-year (2018-2022) international project named iNous focusing on seamless indoor

2: Indoor scanning using Leica BLK360

Indoor

More

Testing navigation scenarios on the resulting FSS.

In order to be able to test navigation scenarios, the extraction of navigation network needs to be considered first. Therefore, our first step to address this part was to investigate the possible networks that can result from the FSS outputs obtained throughout our tests. At this stage, it leaves us with two possible networks:

- A simple network simply lying on the (empty) rooms and their functions
- A more advanced network that avoid the obstacles by using refined R-Spaces

Figure 13: Navigation network from the regular room spaces (top) and the R-Spaces (bottom).

Figure13 illustrate the resulting networks from (o)8 ( )10.6 (u)5.3 (s).307 0 Td [(S)10 [17e 0 Td (1 (at3)Tj 0.00

Figure 16: Identification of navigable indoor and outdoor space (white – indoor space; light brown – semi-indoor; blue – semi-outdoor; purple - outdoor)

Milestones

- Structuring of Indoor Information: partially completed
- Space subdivision FSS: algorithms for automatic subdivision of BIM/mesh models are completed
- Paths for navigation for different users (November 2018):

- Tools for importing BIM model in RDMS (PostGIS)
- Database schema for IndoorGML-LADM and corresponding implementation

Publications within this project

Alattas, A., S. Zlatanova, P. van Oosterom, Ki-Joune Li, 2018, Improved and More Complete Conceptual Model for the Revision of IndoorGML, In: 10th International Conference on Geographic Information Science (GIScience 2018), Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik, 114, Dagstuhl, Germany, pp. 21:1-21:12, 2018.

Alattas, A., P. van Oosterom, S. Zlatanova, Ae Dia02.9 -2.95 Tw 18.163 0 6 (r)86.6:1ol2.9 -2.(O)8.8 p Tw 24i0