Generalisation of framework data: a research agenda

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Introduction

- Why presenting this research agenda?
  - Aim of ITC is to restart research program on generalisation
  - Contribute to/build on previous research
  - Ask for feedback on this agenda

- Push-pull relation with practice

- Generalisation of framework data within NMO’s, Dutch example:
TDN data sets: 1:25.000 to 1:250.000
Current generalisation within TDN

- Semi-automatic generalisation of parts of the process:
  - Interactivity is required
  - Datasets are maintained independently
  - Updates are separated
Example of generalisation within TDN

- Insertion of houses from Large Scale Map into Top10Vec
From Large Scale Map to Top10vec

Using ArcGIS tools

GBKN-buildings 1:1000

Generalised GBKN-buildings 1:1000

Generalised GBKN-buildings 1:10,000

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Research agenda

- Generalisation utopia:
  - Maintain one single base data set within SDI
  - Broad variety of derived products possible (preferably on the fly):
    - (Digital) maps
    - Specific selections of the base data set
    - Low resolution datasets
    - Datasets fused with other data (access of multiple sources)
    - Semantically transformed datasets
Research agenda

- Back to reality:
  - Current practice is not totally ready for utopia
- Relevant question: is utopia feasible/required/wished at all?

- Our research focuses on utopia while defining intermediate steps to be able to adjust end-goal

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Research agenda: activities (1/2)

- Evaluate current practice of generalization, by studying:
  - Literature review
  - Different NMO’s (workshop)
  - Different software using appropriate comparison methodology

- Top-down approach

- Define concepts for generalisation utopia: what are the main problems and requirements

- Define theoretical formalism of data models and structures (formal semantics)
Research agenda: activities (2/2)

- Research projects to test concepts:
  - Research proposal on disclosure of zoning plans at different authority levels (1 PhD for technical issues, 1 PhD for user’s perspective issues)
  - Generalisation projects with(in) TDN:
    - From Large Scale Base Map to 1:10.000
    - From 1:10.000 database to smaller scale database
  - Research project(s) in developing country
- Evaluate and adjust concepts of utopia
- Use of (and research on) MRDBMS seems unavoidable