Generalisation of framework data: a research agenda

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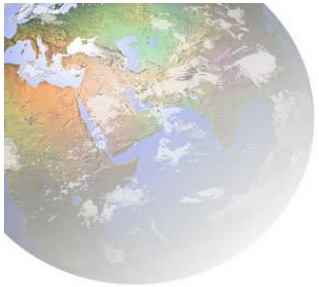
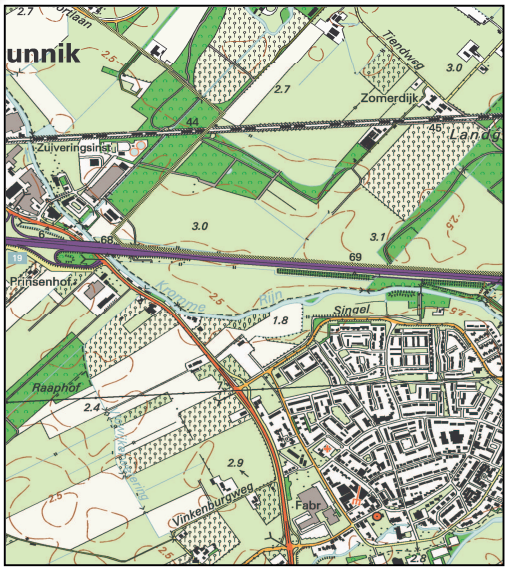
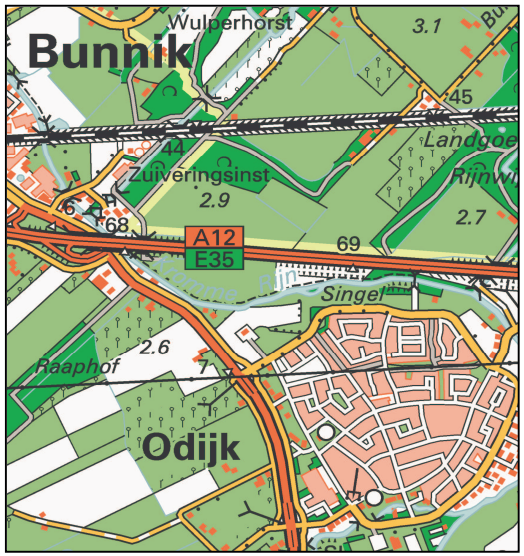


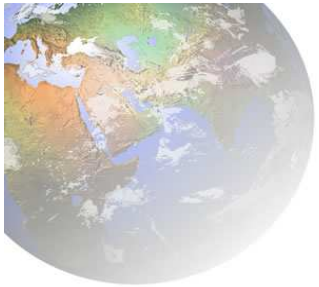
Introduction

- **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 frameworkdata 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

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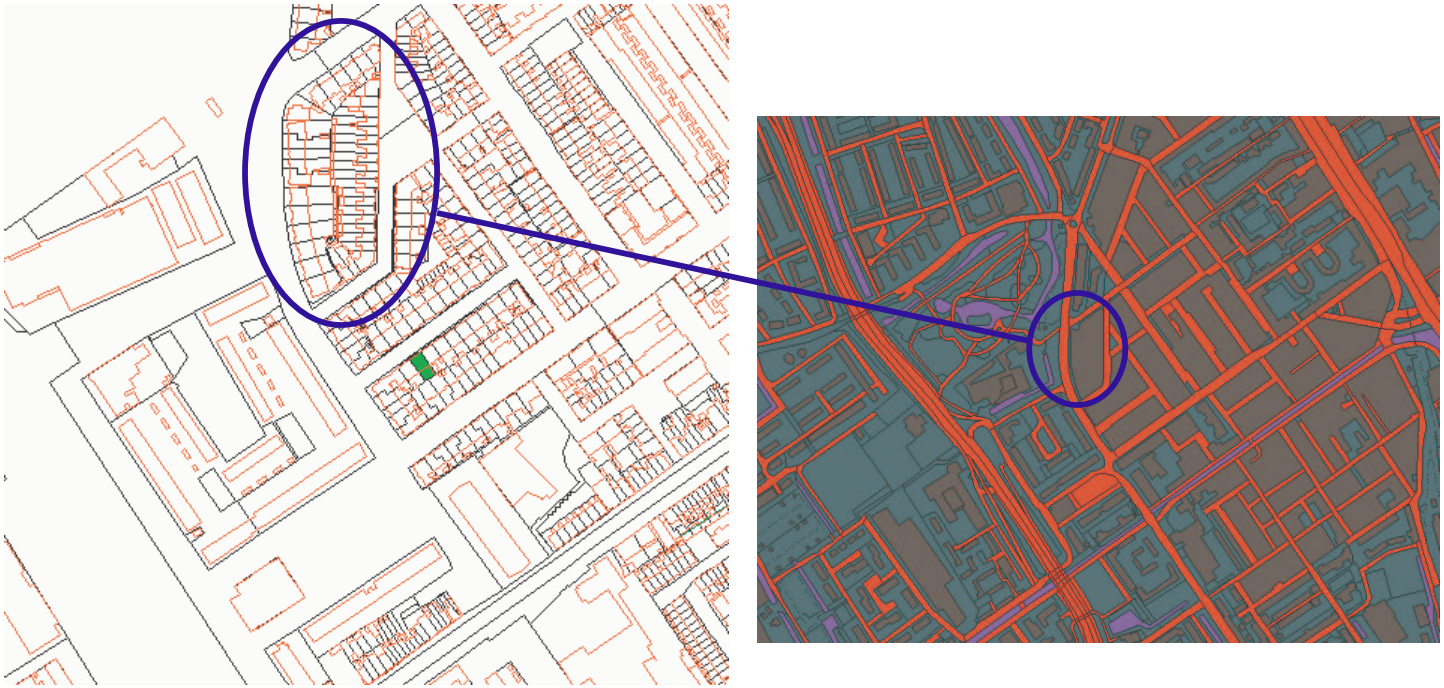
Example of generalisation within TDN

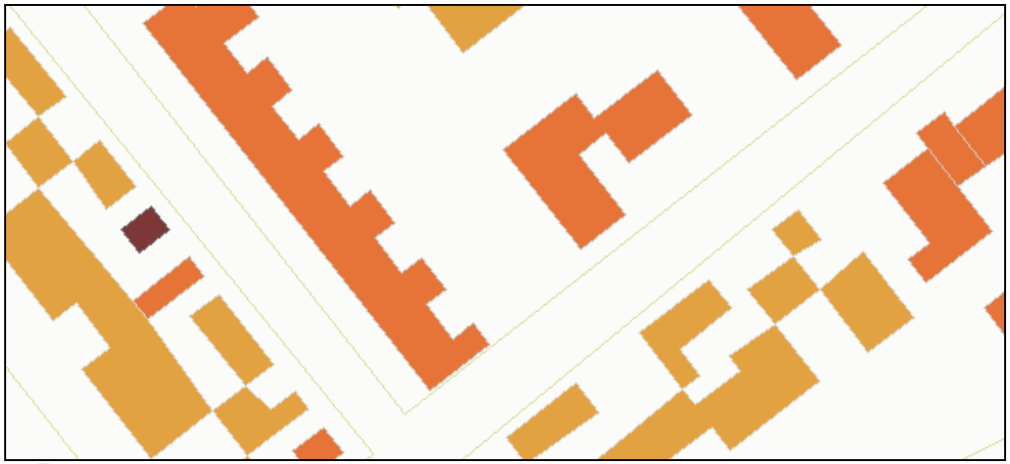
- Insertion of houses from Large Scale Map into Top10Vec



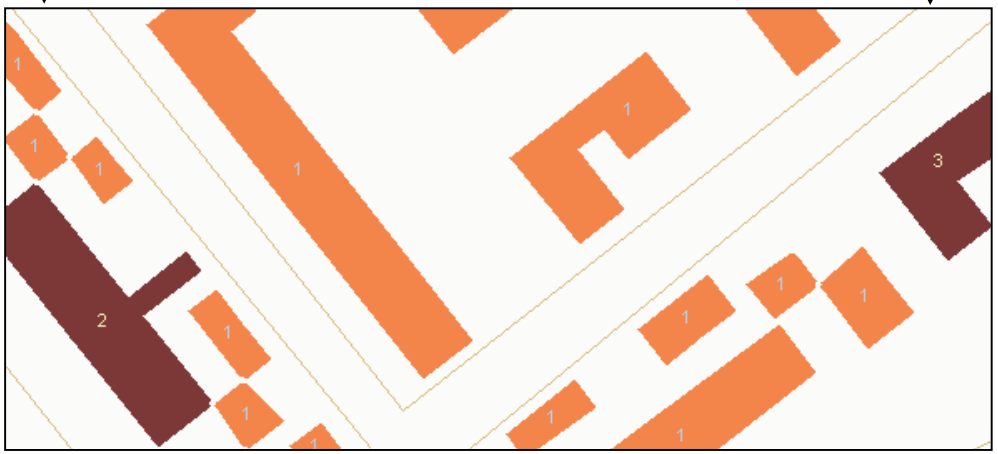
From Large Scale Map to Top10vec

Using ArcGIS tools

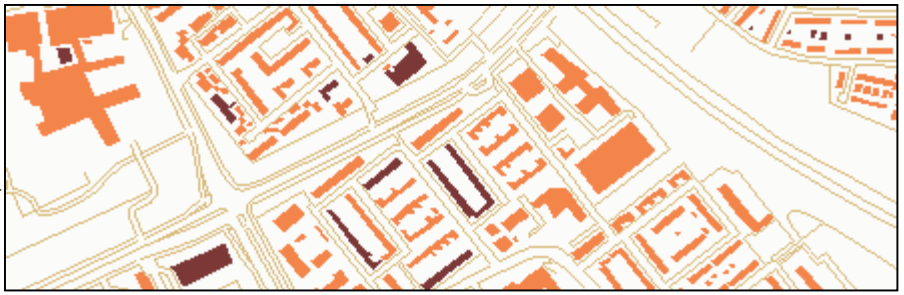
GBKN-buildings 1:1000

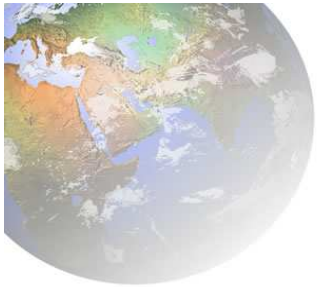


Generalised GBKN-buildings 1:1000



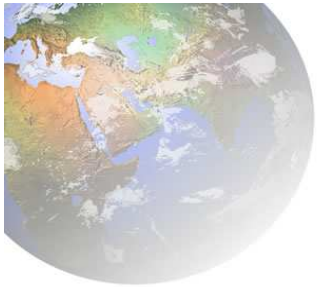
Generalised GBKN-buildings 1:10.000





Research agenda

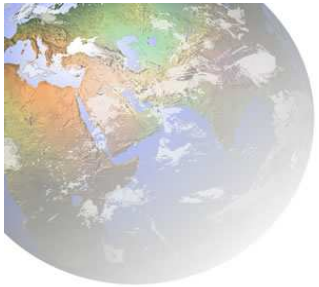
- **Generalisation utopia:**
  - Maintain one single base data set within SDI
  - Broad variety of derived products possible (preferably on the fly):
    - (Digital) maps
    - Specific selections of the base data set
    - Low resolution datasets
    - Datasets fused with other data (access of multiple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



Research agenda

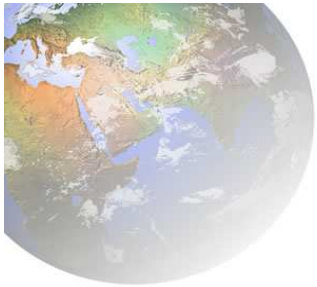
- **Back to reality:**
  - Current practice is not totally ready for utopia
- **Relevant question: is utopia feasible/ required/wished at all?**

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



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**

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