Initial Usability Testing of Vario-scale Maps

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Motivation

- Assumption at start of project: Vario-scale maps will provide faster and more effective interaction: Better understanding / mental model

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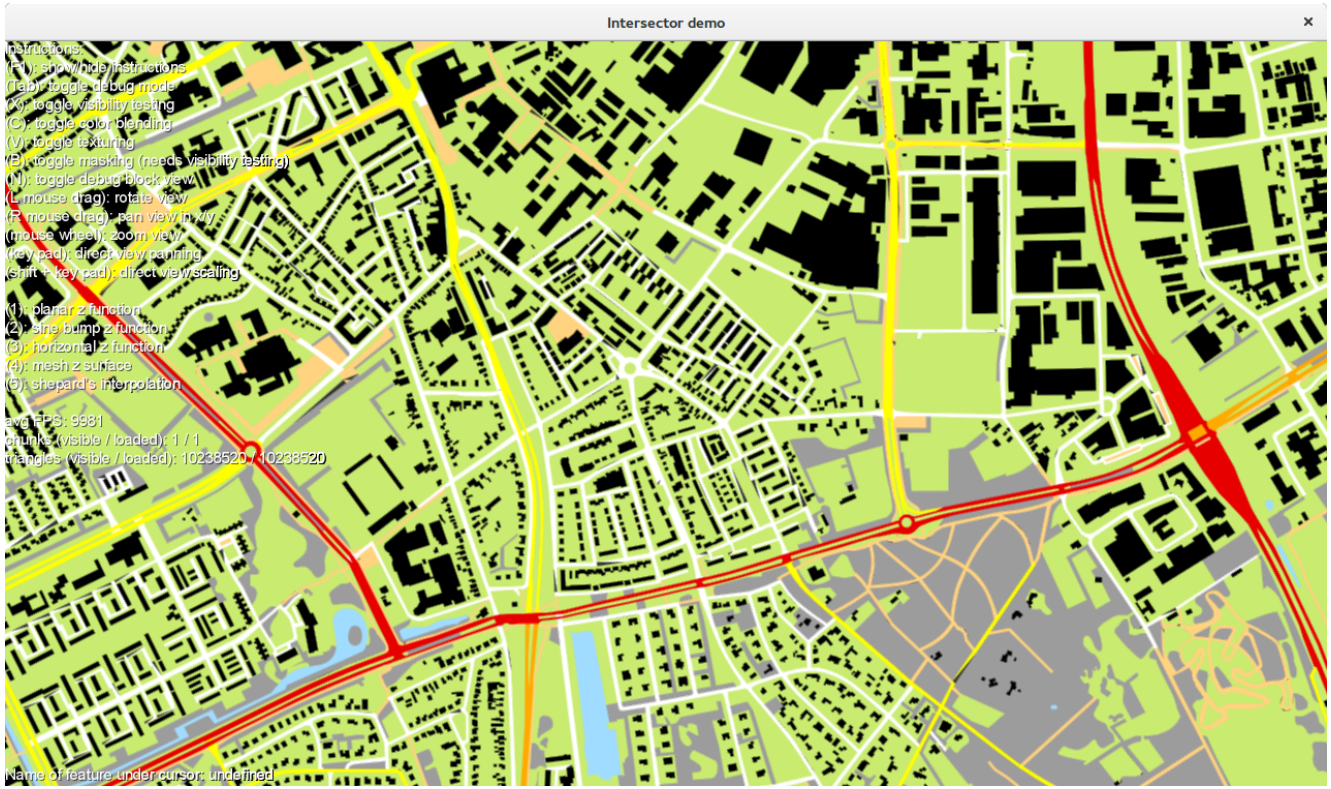
- Viewer for SSC – Now makes it possible to get real / practical experience

Current SSC viewer

- Properties of current viewer implementation:
  - Fast slicing (based on GPU) — Smooth content zoom
  - Colour blending for transitions
  - Mixed scale maps (local magnifier)
  - No polished GUI (Graphical User Interface)



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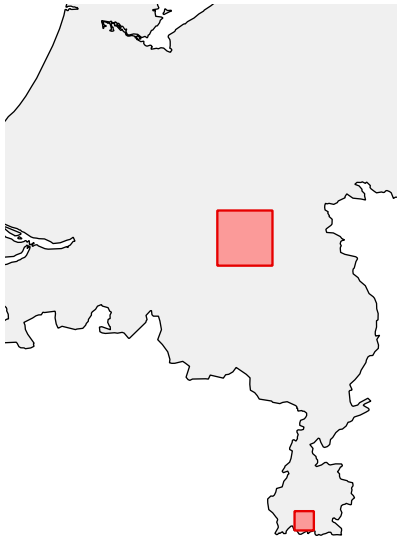
- After initial technical problems for scaling out, viewer is working with larger datasets*

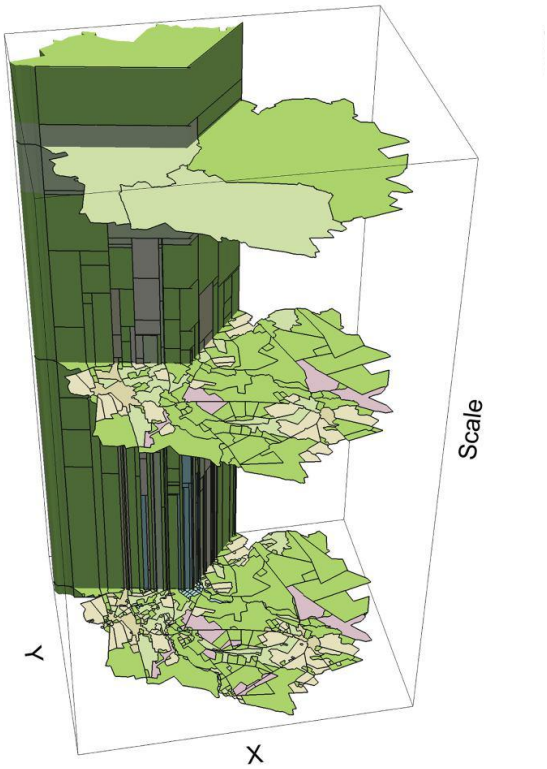


*7x7km, 8k objects and 20x20km, 114k objects

What we want to test

What to test **now**:

1. Discrete sets of data versus continous changing data



What to test **later**:

1. Analyse different content generation strategies
2. Use of different tools (colour blending, local magnifier, perspective view)
3. Different types of mouse/keyboard interaction
4. Animation / morphing techniques

How we plan to test

1. Give user same task for discrete and continous changing dataset + compare, using prepared system
2. During a session:
   - Part 1 – Prepare:
     - briefing
     - get experience with viewer interface
   - Part 2 – Execution:
     - record user and talk-out-loud
     - take movie of the screen
     - record inside user interface the position where user is (if feasible)
   - Part 3 – After test:
     - questionnaire
     - personal impression
3. What kind of persons? — Students / Colleagues
4. How many people?
5. Interaction through keyboard (no mouse)

Tasks users should execute

Limitation of current implementation: Viewer shows colored polygons only, no text, no linear features

1. Put one object in the dataset that we give one classification and use specific color for that object: Track the object (or its surroundings) throughout its scale lifetime
2. Give schematic, but quite detailed drawing of location (zoomed in) that user needs to find, starting at zoomed out state
3. Start at detailed location (zoomed in): Let user zoom out to whole region and measure how long it takes them to get back to initial position
4. . . .

Your input/Brainstorm: Do you have more suggestions?

Thank you for your attention

- Questions?
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