

Automatic placement of text for objects that do not have a clear geographic definition

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Long term timeline



A historical map from Årsunda parish in Gästrikland, dated 1664



Contemporary digital map, Malmö

Agenda

- Very short presentation of the automatic generalisation project
- Text and automatic text placement



The project MTP (Modern Topographic Production)

Presentations at ICC

- Wednesday, July 5, 2017 2:50 PM - 3:50 PM
- Thursday, July 6, 2017 4:10 PM - 5:30 PM

Malmö



Base map
1:10 000



topographic
map 1:50
000



Smaller
scales

Main objectives MTP

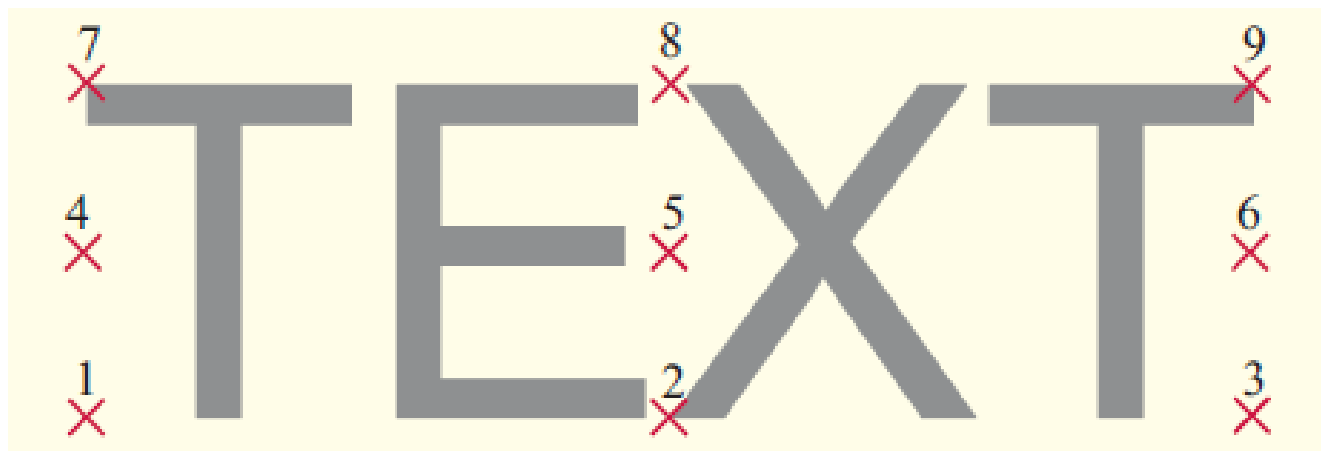
- Increased map production effectivity
- A more flexible production line
- Harmonized content of the topographic databases
- Automatic text placement
- Automatic generalisation of smaller scale maps
 - Starting with 1:10 000 \Rightarrow 1:50 000

Development environment MTP

- ArcGIS Desktop version 10.5 with Maplex, ModelBuilder and FME Extension for ArcGIS
- FME Desktop 2016 Oracle Edition
- Proprietary tools developed with ArcObjects (C#) and Python (ArcPy)
- JavaScript is used to create widgets for the web

Current data model for texts

- Texts as stand-alone objects without connection to real world objects (stored as annotations)
- Points or polylines





1:240 000

1:120 000

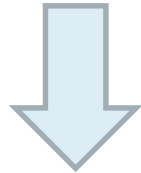


1:60 000



Desired data model

- Texts as attributes to real world objects



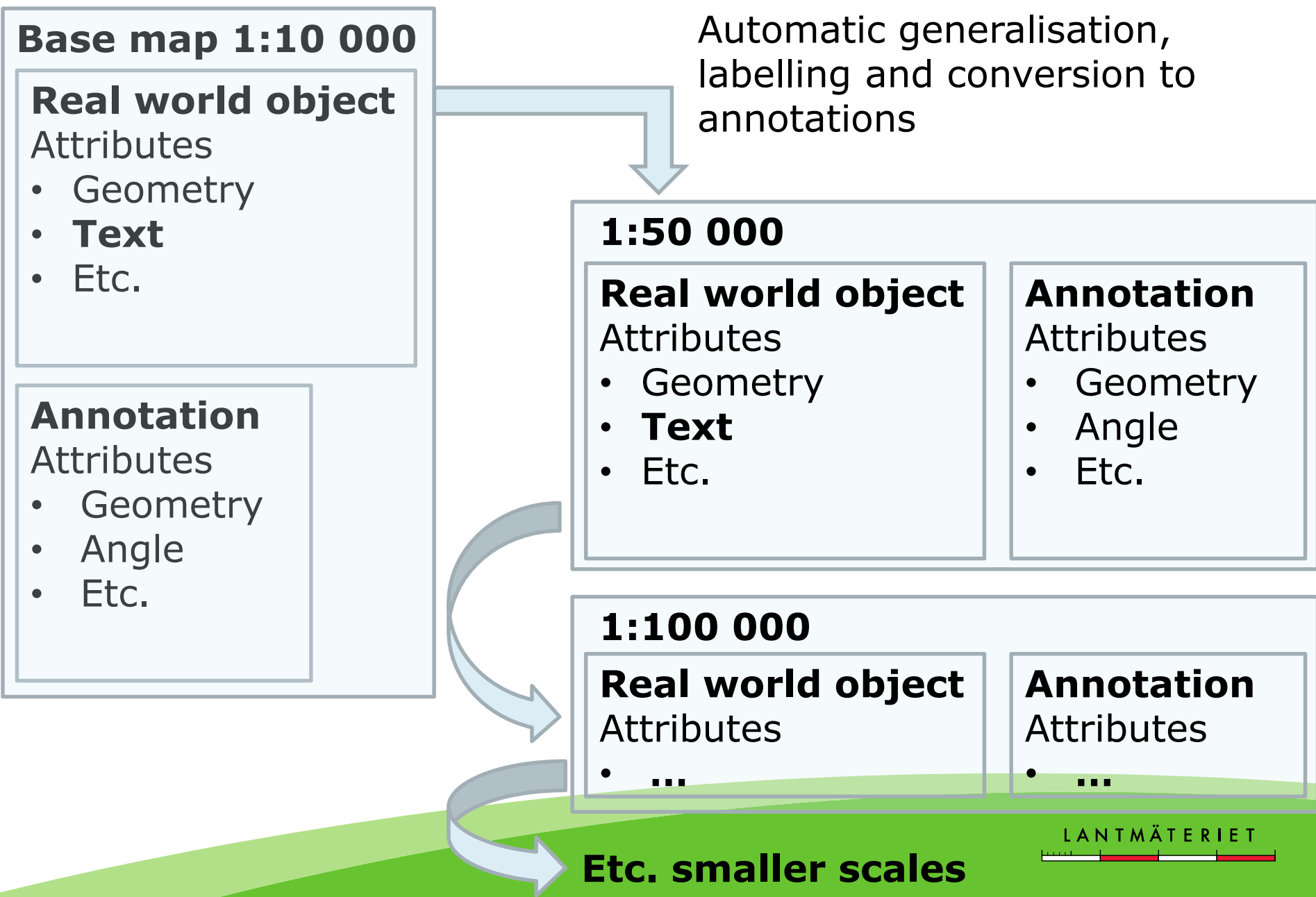
- Where the **type**, **geometry**, **size** and **other attributes** of the real world object can be used to
 - decide in which **scales** the labelling will be done
 - decide **size** and **font** for the text label
 - find the best **text placement**

Work to do in the base map 1:10 000

Automatically store the texts as attributes in the real world objects

- The work has not been started yet, only some testing
- Using geoprocessing tools
- Might be necessary to develop custom tools
- Manual edits can be necessary

DRAFT / MTP Work hypothesis

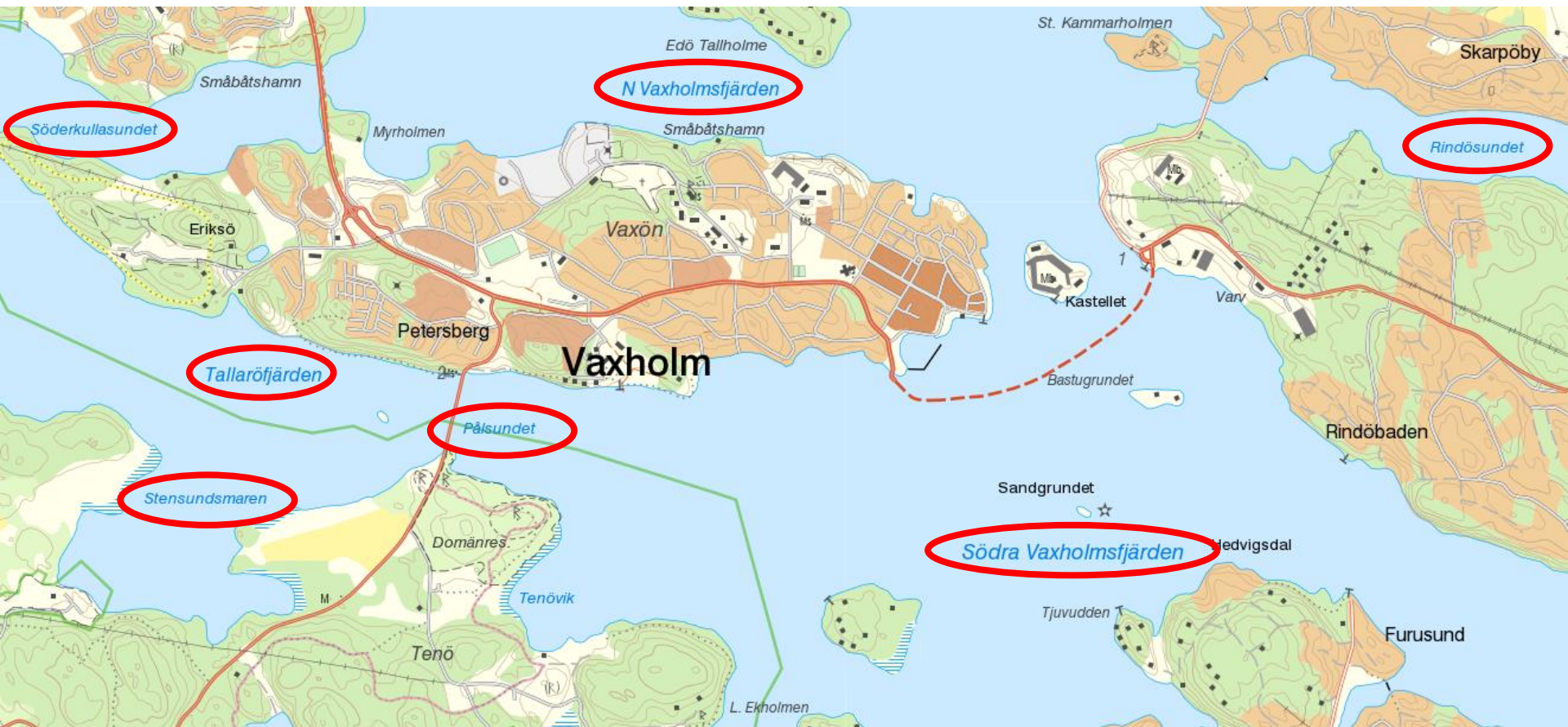


Texts belonging to real world objects without map representation today

- Mountains, valleys, bays, building areas
- Invisible objects will be created

Invisible objects sample

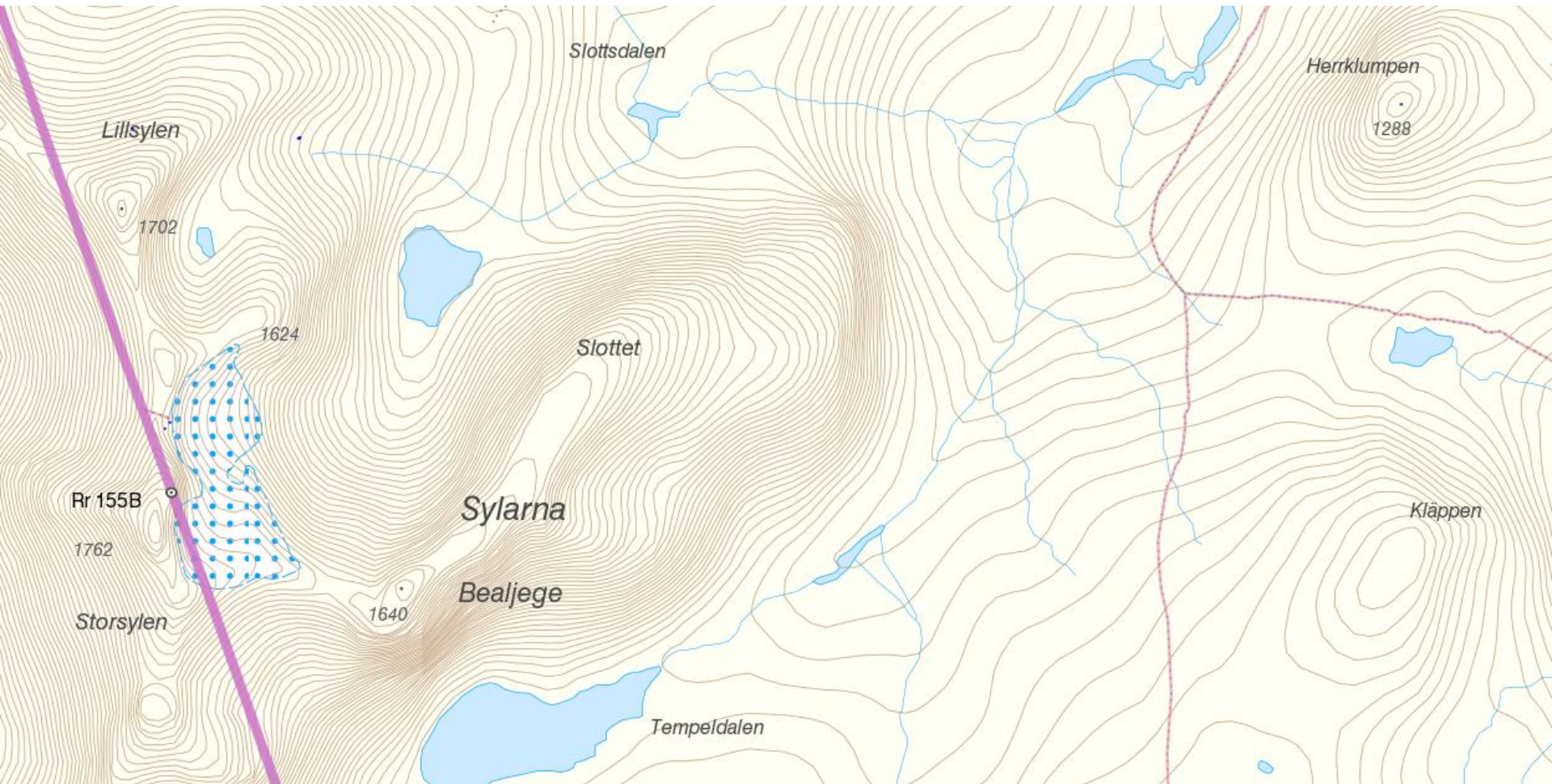
- Bays and straits



1:15 000

Invisible objects sample

- Mountains and valleys



1:15 000

Questions to discuss

1. Other's experiences of labelling

1. Automation level
2. Product types

2. Comparison with manually placed texts

3. Software

4. Performance

Thanks for your attention!

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