

LANTMÄTERIET, SWEDEN

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BACKGROUND

Lantmäteriet, the Swedish mapping authority, today have a manual production of map series in 5 different scales, 1:10 000 (SE10), 1:50 000 (SE50), 1:100 000 (SE100), 1: 250 000 (SE250) and 1:1 000 000 (SE1M). These map series has been developed for different purposes and does not fully harmonize with each other in terms of content.

PROJECT

In 2015 a project started with the objective of introducing automatic generalisation and automatic text placement. Due to the scope of the achievement, the project is divided into 4 parts. Total time for realization is estimated to six years. The plans are most detailed for the first parts to be more schematic for the latter.

The objectives of the stages are;

Stage 1, automatically generalised land cover SE50 (test layer)

Stage 2, automatically generalised map SE50

Stage 3, automatic generalised map SE100, SE250, SE1M

Stage 4, automatic text placement

The project is carried out in four working groups;

Specifications, generalisation, text and data models.

SPECIFICATIONS

Today's specifications need to be compiled and analyzed to achieve harmonization between the scales, and all the information necessary for automatic generalisation needs to be found in the master scale (SE10).

GENERALISATION

Since 2013 Lantmäteriet and the Dutch Kadaster cooperate in areas including 3D and automatic generalisation. Within the framework of this cooperation, we conducted in 2014 a minor pilot project (a so-called High 5) in order to investigate whether Kadaster's methods for generalisation also could work on the Swedish data. The test was limited but gave a very promising result. Since then we have signed a cooperation agreement and as a part of this agreement Lantmäteriet have access to the models for generalisation developed by Kadaster (TOP10NL to TOP50NL).

Our goal is to be able to generalise all of our geographic databases from one master database SE10, and eventually to be able to do this without any kind of manual editing.

This autumn, we have begun the process of developing models for generalisation of the land cover in SE50.

After that we will go on with other layers and also take care of dependencies between different layers. The models will be created in ArcGIS ModelBuilder and FME. In this work we have very great help of having access to Kadasters models, although they must always be adapted to our data our products and our types of landscape.

PLACE NAMES AND MAP TEXTS

Our text today is completely independent of the features they represent. This gives us great limitations for instance in searching for place name information, and not least when it comes to text placement. Although the technology behind the map services will change, we see a great need for automatic text placement even in the future and it's important that it can take place in real time and with high cartographic quality. One of our first goals is to link all the texts to the features they represents and this also include creating new features for the phenomena that are only displayed as text on the map.

DATA MODELS

The databases need to change to meet the demands from the other groups, but a wish is not to change today's data models more than necessary as this require changes in our production and storage environment.

Adjustments will be required, but the aim is to minimize these changes.