

From Field to Web maps with Topocad



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Presentation of the digital flow in Trelleborg municipality.

The digital flow involves different software systems and it is important that they work well together.

Trelleborg municipality is the most southern in Sweden, with close connections to Germany and Denmark, containing approximately 40 000 inhabitants.

The last years the municipality experienced a lot of construction work with several housing areas as a result. The municipality is growing with people moving in, expanding center and harbor construction.

The municipality celebrates 750 years 2007.

History

- During 2003 a decision was made to purchase a new comprehensive software system for the Map and GIS department of the municipality. The software system was planned to contain Map/GIS software and web functions. Search possibilities in address registers and construction registers together with map databases, was also a requirement.
- In May 2004 the software system was purchased by ESRI S-Group, and ArcEditor, ArcView, ArcSDE and ArcIMS was delivered. For the Map and Survey unit ArcCadastre was purchased from the National Land Survey of Sweden. All the software systems had to work with SQL server environment, which is the standard in the municipality.

Introduction of the software systems

- The installation of all the software systems were applied and ArcCadastre was put into test operation in 2004.
- Transference and control of existing data was implemented.
- During the introduction of the software systems we noticed that import and export of field data with ArcCadastre to our system wasn't the most advantageous.
- To get a manageable flow on the basis of simplicity and functionality we started to look for alternatives.
- The choice stood between using the built-in tool "survey analyst" or an extern software system, Topocad, from the company Chaos systems. Topocad was purchased and integrated in the municipality activity in 2006.

Field survey

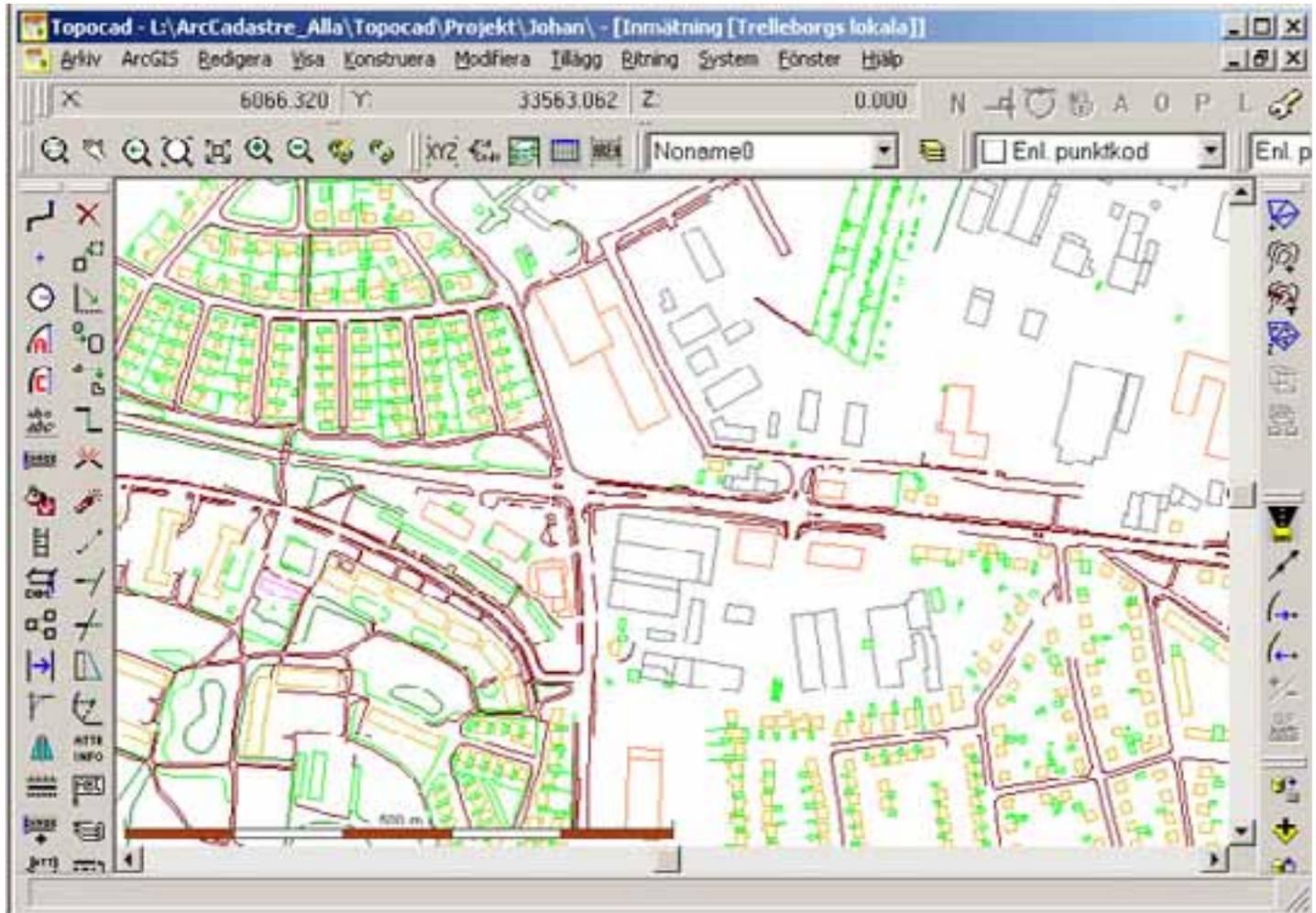
- We use survey equipment mainly from Trimble.
- The department has access to 2 total stations and 3 GPS for surveying.



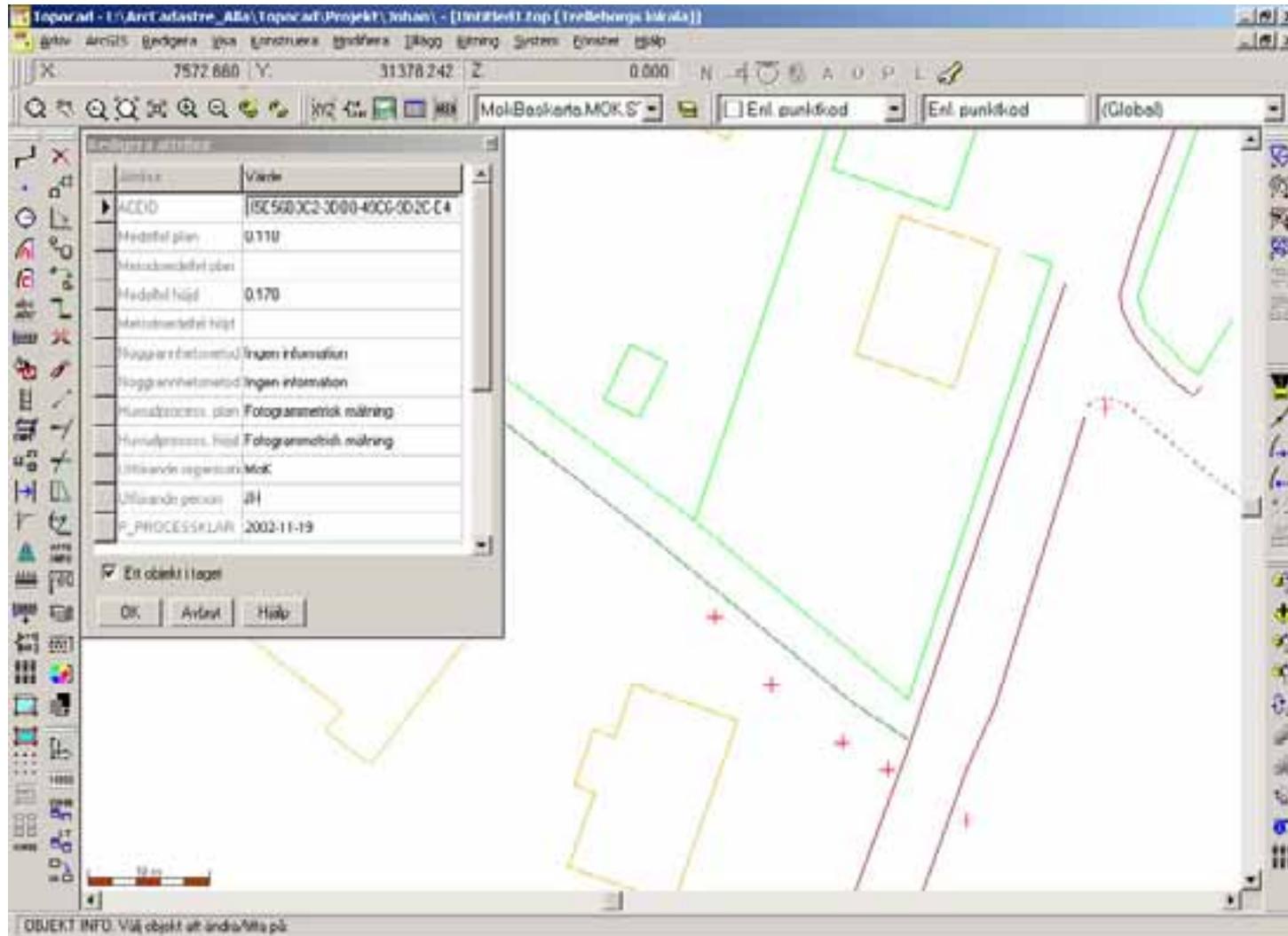
Management of Field data

- Calculation of field data for storage in our map database handles by Topocad and the built-in SDE connection to our database.
- All data collection is made by code settings in field. The field codes is used in Topocad to control which layer the data shall be stored in.
- Calculation of field data or import of co-ordinates is accomplished in Topocad.
- By using the attribute manager in Topocad you can easily store important information such as accuracy, date, type code etc.
- Edit field data and adapt to existing data in Topocad.
- Version management is used to guarantee that data is controlled.
- The field surveying is transferred from Topocad to our public databases with a connected digital flow through the SDE connection.
- Data collection to stake out can easily be imported from different formats.
- Stake out data is transferred to instruments by Topocad.

Topocad



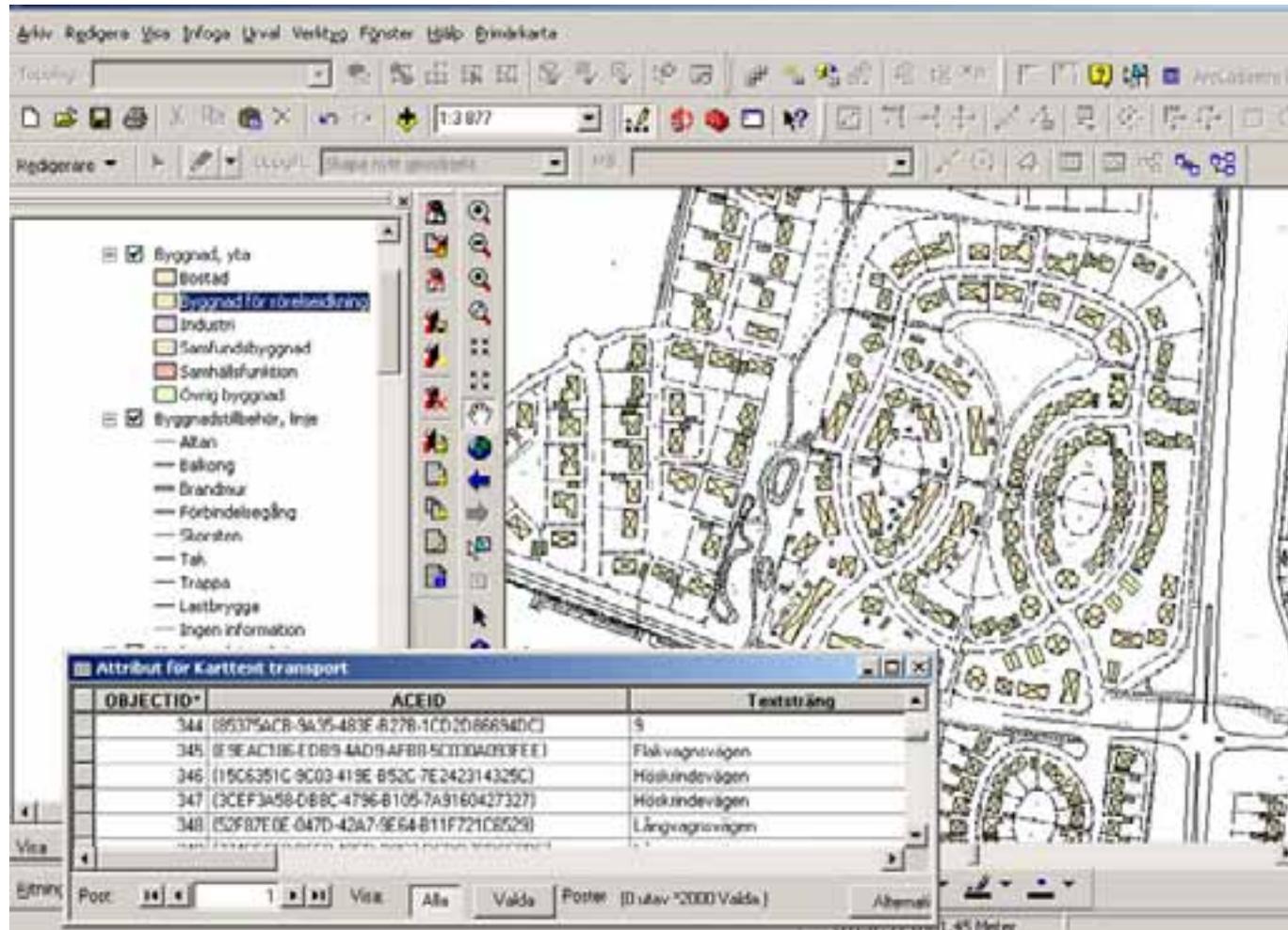
Topocad



Data administration

- ArcCadastre and Topocad are used for editing data to a certain base level called Base map.
- Adaptation to GIS functionality is accomplished by ArcCadastre or ArcEditor.
- In remaining parts of the municipality the spread of ArcView has become an example how to use GIS for your activities.

ArcCadastre



Future

- We are working to get the GIS connection of Topocad more adapted to the SDE environment.
- Topocad in field can be the next step to try, where the same license can be used outdoor or indoor.

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