The Cadastral System of Norway

Tor VALSTAD, Norway

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SUMMARY

The subdivision act from 1980 introduced a nationwide register for properties, addresses and buildings. It was the municipalities that collected this information through the approval process from applications of subdivisions, buildings and local development plans. Although this register included central coordinates for the properties, addresses and buildings it was far from a geographic information system. There was no map included in the system and the cadastral map was a separate system even when it became digital in most municipalities in the late 1990-ies.

A new law on the cadastre has been in the making for several years. The new law was passed by the Parliament in 2005, and then changed and a revised law passed in June 2007. It is still not enacted. But a few paragraphs from this law were enacted in February 2006, enabling the Norwegian Authority on Cadastre and Mapping to introduce a new cadastral register in Norway.

This new cadastral register will accept converted data from the 1980 registers, but will in addition introduce a digital cadastral map as part of the system.

This paper will present the new cadastral system of Norway and give details of its content and the process of introducing it to the municipalities.

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1. INTRODUCTION

The Norwegian cadastre is a parcel-based land information system. Both the national and local government has issued regulations to ensure that the boundaries of real property and leased land are accurately marked, measured and mapped, and furthermore that an updated and reliable register are kept of all real property and leased land and of data connected with the same.

The Norwegian technical register of cadastral information was introduced in 1980 as part of the subdivision act and contains information about properties, addresses and buildings.

2. THE PRESENT CADASTRAL SYSTEM OF NORWAY

Identification of parcels, buildings and addresses

All land in a municipality is divided into fixed number of large areas, which each is given a main registration number. These areas are then subdivided into parcels and numbered in succession by a parcel number. Within a municipality a parcel is uniquely identified with an area and parcel number, eight digits in all. On a national level four more digits are added to identify the municipality.

After the parcel number additional numeric identification can be added for leased property and also for condominiums.

Buildings have a special registration number.

Registration

The national GAB-register embraces properties, addresses and buildings, and currently contains nationwide some 3 million properties, 2 million addresses and 3,6 buildings. All the municipalities in Norway report directly to the GAB database. The Norwegian Authority on Cadastre and Mapping is responsible for the GAB-register.

The Land Registrar has his own Electronic Property Register. Information about ownership is transferred from the Electronic Property Register to the GAB-register on a daily basis.

The national property register (GAB) is at present only a textual database with no connection to a topographic or cadastral map. Some of the bigger cities have introduced local solutions with easy cross-references between map and property information.

Data content

Registration in the GAB register is compulsory, but not so in the Land Registry. But even so both registers gives close to a complete register for all properties in Norway. The purpose of the GAB register was to cover the need for municipal use in planning, addressing, property and building information. But it was also developed to cover statistical needs and for taxation uses both on a municipal and national level.

The three main objects in the register have the following additional information.

Ground parcel:

- Owner
- Owners address and date of purchase
- Market value
- One central coordinate value
- Area of the parcel
- Type of parcel – land use
- Reference to the corresponding address and the buildings upon the parcel

Addresses:

- Central coordinates
- Reference to school district, constituency and postal zone
- Reference to the corresponding building(s) and parcel
- There are two type of addresses, road address (urban) and parcel name address (rural)

Buildings:

- Type of building
- Total area and area of each floor
- Number of floors
- System of water supply and sewage treatment
- Central coordinate
- Information on the building process and the year the building was erected
- In case of condominiums there are information about each apartment
- Reference to corresponding address and parcel

In the last 10 – 15 years some municipalities developed their own GAB register. It contained of course the same datasets as was needed in the central register, but it also made provisions for including datasets of value just for the municipalities.

Procedure

The Land Subdivision Act regulates both the survey work and the administrative routines of the subdivision process that is required to have a new parcel properly identified. The whole process is a municipal responsibility.

Division of a parcel starts with an application from the titleholder. A map showing the desired new boundary should accompany the application. The local subdivision board has to decide whether the subdivision should be permitted according to existing land use and local development and building plans. The subdivision-permission will not be granted if the area is too small to build a house. It is also necessary to have acceptance regarding access road, water and sewage before a final permission is given. The parcel is then surveyed and the new boundary marked. The process always includes a meeting in the field with the applicant and the neighbouring landowners.

Underground parcels

The subdivision of underground parcels follows partly the same procedure as for surface parcels. The titleholder on the surface has to agree to give up his rights to the underground. In Norway there has not been established a finite depth of ownership. But usually ownership downwards has been accepted as far as you are able to utilise it. If it is necessary to reach an agreement with the landowner, a restrictive clause will be added to the title deed of the land at The Land Registrar.

To establish a 3D parcel you have to get a building permit which is valid for three years. A 3D parcel in Norway cannot be established without something being built or it has to relate to an existing construction. There is not any possibility to register volumes of air or rock just to confirm your ownership or to reserve the volume for future use. Neither is it possible to establish a 3D parcel independently from the surface parcel. The surface parcel is the main property object and “construction parcel” are only limited volumes connected to the surface parcel though they can be connected to multiple surface parcels.

3. LAW ON THE CADASTRE

Though the registration of land in Norway has been regulated since the thirteenth century, it is only after the Land Subdivision Act came in 1978, that the whole country has the same identification system for properties.

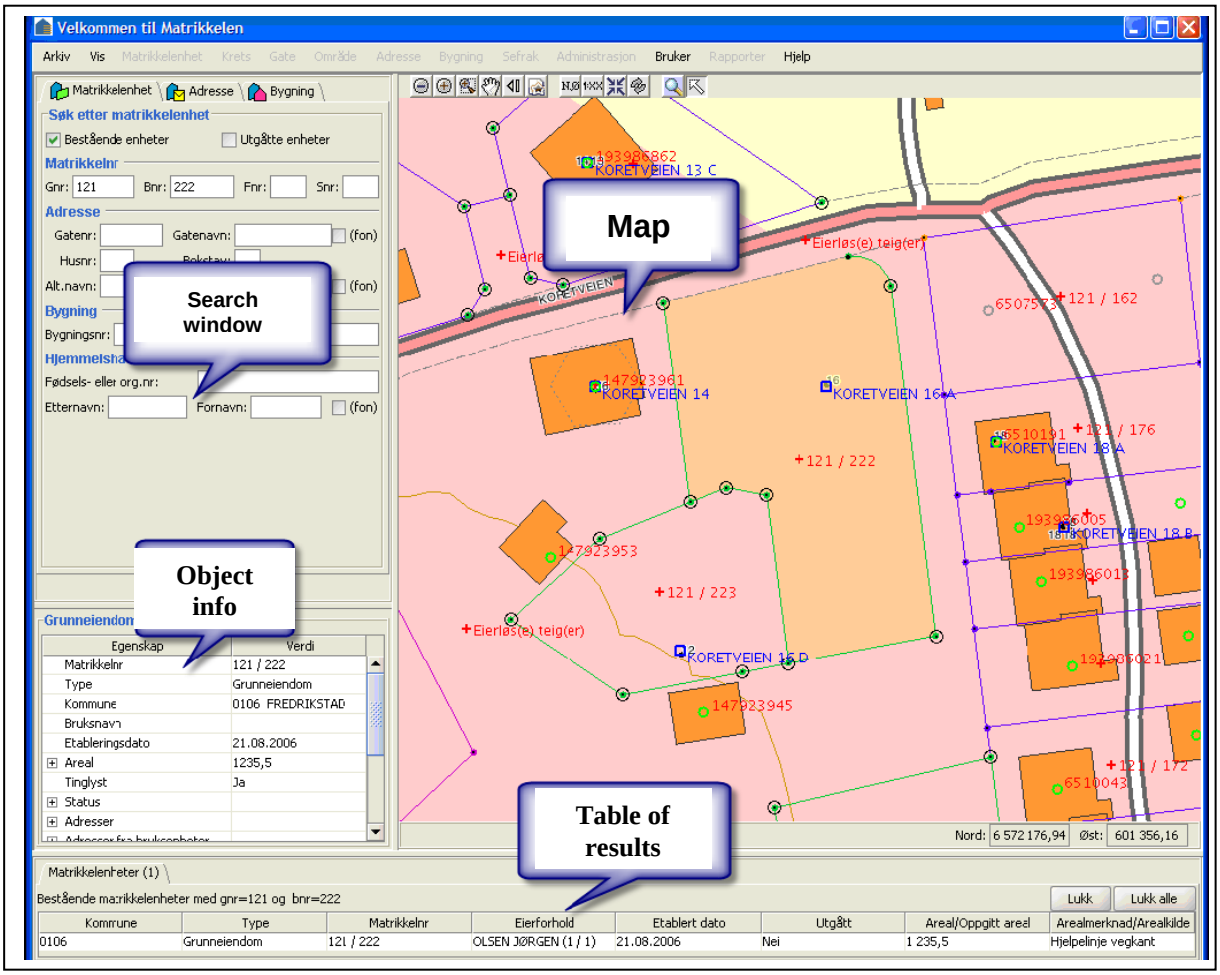
A new Law on the Cadastre was passed by the Parliament in June 2005. But the new government wanted to change the law already in 2006. The law of 2005 opened up so that private surveyors could do the cadastral surveying. This was not to the politicians liking so they revised the law so that cadastral surveying again should be a municipal responsibility just like it is in the subdivision act. A revised law on the cadastre was passed in June 2007. It is not expected to be enacted before March 2009. The main reason is that the regulations are not

finished yet and that all the municipalities should be converted to the new cadastral system in advance.

This new law will then replace the present land subdivision act and will establish a new national cadastral database that includes a cadastral map.

The new law on the cadastre introduces some new property types and some new methods of subdivision. For example it introduces the possibility to establish “construction parcels”. These construction parcels can be established below the surface of the earth or they can be established above the surface usually as constructions erected on pillars. There are also provisions for establishing constructions at sea or fresh water both for structures built on the seabed or floating, but properly anchored constructions.

4. THE NEW CADASTRAL SYSTEM OF NORWAY



This is an example of the main view of the new central cadastral system developed by the Norwegian Authority of Mapping and Cadastre.

This national cadastre with both cadastral information and a corresponding digital cadastral map was introduced late in 2007. After a pilot period involving 14 municipalities, close to half of Norway's 430 municipalities have now been converted to the new cadastral system called the "matrikkel". In February 2009 the last of the municipalities should have been converted.

The municipalities have two options. They can use the central software or they can purchase one of the two commercial developed products. In any case the updating must be done directly into the central database. But the updated data are transferred to the local software. This local "matrikkel" can be used by the municipalities for their own viewing and reporting. This also makes it possible to add their own specific datasets that they were used to in the local GAB versions.

This conversion to a completely new cadastral system is a huge task both for the Mapping Authority and for the municipalities.

Although the content is more or less the same, the process of entering and updating data are more formal and require certain quality checks and it will make it possible to track any changes. The municipalities have been put under a pressure to do quality checks on their data and do any adjustments before they are converted to the new system.

After the enactment of the new law on the cadastre there will be a number of new objects and additional information that the municipalities have to enter into the system:

- construction parcels
- joint property
- polluted ground
- municipal restrictions to area, property or building
- more detailed building information
- cultural heritage objects

In addition this new central database is already under pressure to include several new items for example universal design.

BIOGRAPHICAL NOTES

Head of Cadastre in the City of Oslo 1993 – 2000, 2003 -.
Cadastral Programme Manager at the Kosovo Cadastral Agency in Pristina, Kosovo 2000 - 2002.
Earlier experience in engineering surveying, land, geodetic, hydrographical and quantity surveying.
Secretary of FIG Commission 3 from 1996 to 2002. Norwegian delegate to Commission 3.

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