

THE CADASTRAL REFORM IN THE CZECH REPUBLIC

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Motto:

„The remedy of former mistakes in such extensive information systems, as the cadastre is, is extremely expensive and needs long-term political and economical stability and time counted not in years, but in decades.“

INTRODUCTION

The Land Cadastre as a tax tool and the Land Registry (grundbuch) have a very long tradition on the territory of the present Czech Republic, which was a part of the Austrian-Hungarian Empire until 1918. The legal base of modern era of these institutions was created by the Civil Code from 1811, the Cadastral Law from 1819 and the Land Registration Law from 1871, which established some basic principles valid and used even today.

The post-war development in the Land Registry and the Land Cadastre was heavily influenced by the political events in the Czech Republic. Continuous development of the cadastre and the land registry was interrupted after communist coup in 1948. The result of radical political changes was a new Civil Code of 1951 which, apart from other things, abolished obligatory registration, suppressed some individual rights and preferred new collective and state rights to use land. The Land Registry records were not regularly updated, lost their legal reliability and after some time it was even impossible to keep them at all. The only documents proving ownership and other rights in land from that period were individual deeds without any list or register enabling to get a certainty of their succession. The cadastre including maps was very simplified and the new cadastre founded in 1954 represented not rights, but physical use of land only (not even rights to use). This substantial change in registration of land was so hard, that after some time it proved to be inconvenient even for the political aims of communist state.

In 1964, when a new Civil Code came into effect, it was decided to establish State Notaries (registering not all deeds but only deeds concerning individual persons) and to modify the current cadastre completing it with simplified records about ownership rights to support the rights of the state, of state enterprises and co-operative companies. The rights of natural persons were suppressed in this deformed rule of law. The person was generally permitted to own land but not permitted to use it in some cases. Under such conditions the cadastre was heavily deformed as well, and the parcels of persons used by the state and by co-operative companies were amalgamated into huge blocks and were not individually registered in the cadastre. This new cadastre according to the Cadastral Law from 1964 was kept on the base of deeds (some of them registered by the State Notary) but had no legal consequences. The only proof of rights in land was still the proper deed. The most precious part of this cadastre is thus the collection of

deeds, which was completed even from the period of absence of any registration (1951 - 1964) by systematic searching during years 1966 to 1988.

After the fall of the communist regime in 1989 a new governmental programme of restitution, privatisation and general economic reconstruction started. The current cadastre couldn't meet new demands and it was decided to come back to the time-tested principles of previous land registry a land cadastre. **The result is a "legal cadastre" combining the land registry (legal tool) and the land cadastre (technical tool) into the only instrument administered solely by survey authorities.** This solution was accepted as the easiest in the circumstances. During years 1991 and 1992 new basic cadastral legislation was prepared and came into effect at the beginning of 1993.

Thus, January 1, 1993 is a milestone in the long history of the land cadastre in the Czech Republic and the beginning of the cadastral reform.

CADASTRAL REFORM (1993)

The governmental program of massive restitution and privatisation of property needed a reliable and smoothly working cadastre. The existing defective cadastre was not able to meet the demands. It was necessary first of all to strengthen the legal part of the cadastre to be able to serve as an effective tool of economy and right, and to improve substantially the performance of the cadastre.

The main requirement for the new cadastre was to give permanently and promptly the complete and legally valid information about land and rights :

- to give a certain level of guaranties to owners and creditors,
- to involve real property capital into economy,
- to facilitate transactions with land,
- to define boundaries of individual plots of land,
- to serve as a tool for tax purposes of the state,
- to serve as a tool for land management,
- to enable easy access of the public.

To ensure continuity needed, it was necessary to start with the data of the existing cadastre. The existing defections forced us to involve some temporary provisions into the new cadastre. Generally, we started with the existing cadastral maps, existing cadastral data and files, and with existing software, but with the new cadastral legislation. The new cadastral legislation needed a quite new approach to the cadastral data and processes. Several series of vocational training on all levels were prepared and carried out beforehand. The vocational training of employees continued, especially in the branch of law, and for new employees involved into cadastral works.

The cadastral maps cover all the territory of the state. About 30 % of area (all towns and more active areas) was covered by modern and accurate maps at scale 1:1000 or 1:2000 (m.s.e. ±14

cm or ± 26 cm respectively) with co-ordinates or possibility to calculate them from the original data measured. The rest of area was covered by the old cadastral maps at the historical scale 1: 2880 (measuring table method). All the maps had been re-drawn on plastic foils.

The descriptive cadastral data (about parcels, owners and their addresses) had been converted into computer files except detailed data about legal information (so called „owner’s folios“, which were hand-written in standardised forms including references to the title).

The above mentioned cadastral data were, according to the new legislation, considered as the data of the new cadastre. Since some individual parcels of different owners amalgamated into huge blocks of agriculture or forest land were not represented in the current maps (and were hidden under the parcel number of the whole block), it was necessary to accept provisionally the „simplified records“ of such „missing parcels“, which were defined with the help of maps of the previous cadastre (boundaries and parcel numbers from the previous land cadastre). There were about 8 million of those parcels registered in the owner’s folios according to the previous cadastre parcel numbers.

During 1993 the government approved the **long-term cadastral conception**, which covered the most important tasks of the further improvement of the cadastre including the higher level of computerisation (digitisation of the „owner’s folios“ and cadastral maps), completing „missing parcels“ into the maps, and improving access to the cadastral data.

NEW CADASTRAL LEGISLATION

The purpose of land registration and cadastre itself is so tightly connected with law, that the legislation in this sphere should be considered as immensely important. Legal framework of land registry and cadastre is not only the base for all the activities in this field but it is even a part of its final result.

The new basic cadastral legislation consists of the following laws and regulations:

- Law No 264/1992 (**changes and amendments to the Civil Code** and some other laws),
- **Land Registration Act** No 265/1992 (amended in 1996),
- **Cadastral Law** No 344/1992 (amended in 1996),
- **Survey and Cadastral Administration Act** No 359/1992,
- **Cadastral Regulations** No 126/1993 (since 1996 new, No 190/1996),
- **Survey Act** No 200/1994,
- **Survey Regulations** No 31/1995.

The Civil Code was completed with provisions about acquisition and conveyance of real estate property and about the origin of other rights on the base of agreement. Such agreement does not come into effect until the entry (registration) of the agreement into the cadastre is done. Similar

amendments were completed into the Commercial Code and some other special laws dealing this problem in connection with privatisation and restitution process. This solution enables the cadastre to be complete and owners to be known to the public.

The Land Registration Act first of all determines what rights in real estate are registered in the cadastre. They are: ownership rights, mortgage, rights corresponding to easement, right of first refusal having effect of right in rem, and other rights as far as they are created as rights in rem.

There are three types of registration in the cadastre:

- registration by entry,
- registration by record,
- registration by annotation,
- and their deletion.

The **registration by entry** into the cadastre is needed for the all rights based on agreement. These rights originate, change or extinct by entry into the cadastre. The entry into the cadastre and its deletion is possible only on the basis of positive decision made by Cadastral Office according to the Public Administration Act. The legal consequences of the entry into the cadastre start with retroactive effect from the day of delivery of the entry petition to the Cadastral Office.

The Cadastral Office initiates proceedings at a petition of participant of agreement or other competent person. Deeds shall be examined from the point of:

- right of disposal to the object in the agreement,
- whether the form of the legal act meets legal requirements,
- whether the contractual acts of participants are sufficiently certain and intelligible,
- and whether the contractual freedom is not restricted.

If the deed complies the conditions the Cadastral Office will make decision permitting the entry. Otherwise it refuses the entry. The negative decision shall be delivered to all participant. The parties have the right to appeal against the negative decision to Court.

The rights originated, changed or extinct not from agreement but from a law, by decision of a public authority, by knock down in a public auction, by obtaining on prescription, by accrual and by working out, are **registered** in the cadastre **by record** on the base of the deeds proving this facts according the law. In principle, the public deeds are needed for the records of rights into the cadastre. There is a duty for the all public authorities and the others to send such deed to the appurtenant Cadastral Office within thirty days to carry out the record. Unlike the entry, the Cadastral Office does not examine such deeds, it only finds whether there are no mistakes in writing and calculation or other evident incorrectness. If the deed is not able for record, the Cadastral Office will send the deed back.

The annotation is used for registration of some important legal facts or relations concerning to the real estate or person. According to the law an announcement of execution, bankruptcy, or expropriation by Court or other public authority is registered by annotation. The annotation shall be made as well in cases when the legal relation is to be determined by Court.

The person who acts on the base of the data registered in the cadastre according to this law acts in good faith (*bona fide*) that the facts registered in the cadastre correspond to the real state of

affairs. Even the records registered in the previous cadastre (until the end of 1992) prove the truth of registered facts until the contrary is proved.

The cadastre is open to the public. Everyone has the right to have a look into the cadastre and make copies or extracts about legal information.

The Cadastral Law defines the Land Cadastre of the Czech Republic, its content, cadastral documentation, and administration of the cadastre.

The objects of the cadastre are:

- Cadastral units (usually one cadastral unit covers a smaller municipality area),
- Plots of land (sorted according to the following types: arable land, hop-fields, vineyards, gardens, orchards, meadows, pastures, wood-lands, water areas, build-up areas, and others),
- Buildings connected with the land by solid foundations (according to the Civil Code the real estates are land and such buildings),
- Flats and other rooms (only in descriptive data),
- Legal relations to real estates.

The cadastre contents:

- Geometric determination and positional determination of real estates,
- Parcel numbers, types and areas of plots, building numbers, selected information about preservation and exploitation of real estate, tax information, and key identifiers enabling mutual data interchange with other information systems,
- Information about legal relations (registration of titles) including data about owners, joint-owners and others in right and their postal addresses,
- Data about minor geodetic control,
- Place and local names.

The law regulates in details the administration of the cadastre, especially the proceedings of registration, the proceedings in correction of errors and omissions, and verifying of copies from the collection of deeds of the current and even from the historical land cadastre and the land registry.

All the administration activities in the cadastre are ruled by the Public Administration Act if there are no special provision in the Land Registration Act or in the Cadastral Law.

The law determines conditions and processing of the new cadastral mapping, methods of searching boundaries, solving of appeals against the results of new mapping, and announcing the legal validity of the new cadastral documentation.

There are significant provisions here about carrying out surveys, especially about the sub-division plans. The sub-division plan is an inseparable part of deeds for registration in the cadastre. The plan shall be authorised that it meets all the requirements of regulations valid and the numbering of parcel shall be verified by the Cadastral Office to be corresponding to the cadastre.

According to the law the cadastral data: name and geometric determination of cadastral unit, parcel number, geometric determination of property, are strictly obligatory in the all legal acts concerning real estates. On contrary, the parcel area is defined as a result of its boundaries and this information has no legal consequences.

All the cadastre documentation is open to the public and everybody has the right to have a look into them and make copies, extracts and sketches for one's personal use. The Cadastral Office shall make copies and extracts from the cadastre on request. The copies, extracts and identifications of parcels (comparison of identity of the old and new parcels, if possible) made by the Cadastral Office are public deeds.

The law also charges owners, municipalities and public administration with some duties. There is a duty to mark out the boundaries, to submit deeds, etc.

The continuity with the previous cadastre needed is secured by provision that the documentation of the previous cadastre (until 1992) is considered to be the cadastral documentation according to this law. Similarly, the real estates are registered in the cadastre according to the previous regulations, until they are touched by changes during time of the validity of this new law.

The Survey and Cadastral Administration Act institutes survey and cadastral authorities and delimitates their competencies. The supreme administration body, submitted directly to the Government, is the Czech Office for Surveying, Mapping and Cadastre. On the level of regions Survey and Cadastral Inspectorates were created. On district level Cadastral Offices were instituted as the executive authorities. They are subordinated directly to the Czech Office for Surveying, Mapping and Cadastre.

The Cadastral Regulations amplify and specify provisions of the Land Registration Act and the Cadastral Law, set down details of content and administration of the cadastre and specify the basic technical aspects. Extensive appendices cover nearly all the technicalities of the cadastre (e.g. methods of survey and their processing, accuracy parameters, working out of sub-division plan, system of codes used, extracts from technical standards, examples and specimens of outputs, etc.).

The Survey Act determines and defines survey activities, rights and duties in carrying out the survey activities, verifying of the results of survey activities, and as well deals with the geodetic datum and the state map series.

The survey activities shall be carried out by qualified persons with completed education in surveying. The results of survey activities used for administration and maintenance of the cadastre and for the state map series shall be verified by authorised person that they meet the demands of accuracy and correspond to the legal regulations. The results used in building industry shall be verified similarly. The law determines in details the conditions and proceedings of giving authorisation, and the rights, duties and responsibility of authorised persons.

LONG-TERM CADASTRAL CONCEPTION

The difficult work on the conception of the further development of cadastre was crowned by acceptance of **The Conception of Digitisation of the Cadastre** by the government at the end

of 1993. This very important act represented not only the approval of priorities, but also the financing of the whole project reaching to the year 2006. The Conception established the main priorities as follows:

- completing PC-LAN in cadastral offices in 1994
- digitisation of owner's folios (incl. completing with missing parcels) - 1998
- completing with data about soil quality - 1998
- completing of identifiers (personal number, company registration number) - 1998
- densification of minor geodetic control (according to the needs of land consolidation)
- digitisation of the newer cadastral maps (incl. completing with missing parcels) - 2000
- digitisation of graphical maps 1:2880 (incl. completing with missing parcels) - 2006
- gradual transition of the cadastre to the higher level of information technology.

The Conception corresponds with the main requirements of the cadastral legislation, meets the needs of state information system, creates the conditions needed for the land consolidation programme, and supports wide development of GIS. The Conception considers also the issues of personnel and their education, and the financing of the whole programme.

COMPUTERISATION OF THE CADASTRE

The computerisation of the cadastre is the main way known how to increase its efficiency. But it needs investments and time to data conversion. In conditions of massive restitution and privatisation and general pressure on cadastral data it was necessary to weigh carefully the priorities in the whole computerisation process and to prefer the steps which would bring the optimal effect in time, quantity and quality.

The computerisation of the previous cadastre started in sixties, from the beginning on punch-card computers (first numerical only, later alphanumeric) and continued on mainframes. The computers (located in several centres) were used first of all as a tool for the renewal of the descriptive data files and for geodetic calculation and drawing maps. But the cadastre itself in the cadastral offices was updated simultaneously by hand. Only wide accessibility of PC enabled the cadastral offices to start with the full use of the advantages of computerisation in everyday work. The implementation of PC LAN in cadastral offices started a new epoch in the automation of cadastre.

In 1994 the last cadastral offices were equipped with PC LAN and the supplies of efficient workstations for computer graphics started. Support within the PHARE scheme was very helpful and accelerated the whole process significantly. Beforehand modified basic cadastral software and the existing data files enabled to start with the current work. The central mainframe in the Land Survey Office was connected with PC LANs of the cadastral offices by means of telephone lines and started to serve as a central database (from the beginning as a backup database).

Beside the current work, the program of systematic digitisation of the last hand-written documents - „owner's folios“ - started. Simultaneously, the digitisation of cadastral maps with known or possible to calculate co-ordinates started. The data transfer standards and the data structure of the cadastre files and digital cadastral map were fixed. Since the modified former software

couldn't meet the future requirements, the work on the cadastral software of new generation started.

PRESENT STATE OF THE CADASTRE

The Cadastre of Real Estate of the Czech Republic combines the former Land cadastre and the Land Registry and creates united instrument of economy and right administrated solely by survey authorities.

The supreme administration body, submitted directly to the Government, is the Czech Office for Surveying, Mapping and Cadastre. On the regional level there are 7 Survey and Cadastral Inspectorates. On district level there are 77 Cadastral Offices as the executive authorities subordinated to the Czech Office for Surveying, Mapping and Cadastre. In addition, there are 2 special institutions: the Land Survey Office, and the Research Institute of Geodesy, Topography and Cartography. The total number of employees is 5.734 (5.208 employees in Cadastral Offices). The structure of employees is as follows: graduate technicians 18 %, graduate lawyers 5 %, technicians with technical college certificate 59 %, others 18 %. The employees are trained in accordance with the conception of vocational education and training.

The cadastre covers all the territory of the state. It comprises 21,325 million parcels, and the data about 6,784 million owners on 4,103 million owner's folios, arranged in 13.078 cadastral units.

The descriptive cadastral data are fully digitised and kept in computer form (this extremely difficult task, added to the current work, was finished in 1998). The task included not only a simple conversion of the rest of legal data, but also completing of missing parcels, missing references to titles and missing identifiers, involving national environment into records, and some other improvements like data restructuring, etc.

On the request of the Ministry of Agriculture the cadastre has been completed with the soil quality data of agriculture land. Even if the proclaimed aim (taxation) is rather problematic, the data may be useful in protection of environment and can support the valuation of agriculture land.

The all cadastral offices are sufficiently equipped with PC LAN and are connected by WAN with the Central Database in the Land Survey Office, which is able to supply the descriptive cadastral data all over the state on request.

The completing of „missing parcels“ into the current cadastral maps was put off till their digitisation, which will enable to do it more effective and accurate. A part of cadastral maps was over-worked into the form of the digital cadastral map kept now in computers. The proper technology of over-working and updating maps has been verified sufficiently, so that the over-working of maps will continue in great progress.

In 1997 intensive work on a new all-embracing cadastral software started. Due to some delay in solution the first results has been tested and are implementing just now. The new solution of the

Information System of the Cadastre suppose substantial raise of efficiency, improvements in data security and better access to the cadastral data, including remote access of competent users.

ENHANCED CADASTRAL SYSTEM

Due to an international consultant help (first of all within PHARE scheme) the key questions about reliability of cadastral data, improvement of its function within the state information system and its future financing are widely discussed now.

The digitisation of the cadastre and the new software with WAN enables remote access to cadastral data, both descriptive and graphic. It gives good prerequisite for building enhanced cadastral system which can offer more reliable, quicker and wider cadastral services. Questions about rising guaranties to owners and creditors, more effective involvement into land and building taxation, improved land administration, and better support of land market are discussed. Since improved services require high initial investment, the questions of future financing are solved as well. A new system of payment for services, especially for remote access, covering at least current cost is considered.

A wide open forum „*NEMOFORUM*“ has been established which comprises main users of cadastral data both from private and public sector.

CONCLUSION

The solution of the cadastre, uniting land cadastre and land registry into one instrument - „legal cadastre“ - administered by surveying authorities, has stood the test of time. The making decision about entry into the cadastre by survey authorities according to the Public Administration Act (instead of decision of the Court) in connection with the possibility to appeal to the independent Court, is simple and proved to be much more quicker, more effective, and taking care of the rights of persons sufficiently. Beside that, it simplify the dealing with the complicated technicalities of developing cadastre in a substantial way.

After seven years of the cadastral reform it is possible to state:

- The new cadastre works reliably and has even stood the severe test of massive restitution and privatisation.
- The cadastral legislation has proved to be relatively good and is, step by step, improved on the base of experience and newly opened requirements of information technology.
- The cadastral offices are equipped with local databases and are connected to the Central Database by WAN.
- The cadastral offices are equipped with qualified personnel being able to cope even with the tasks of future development. There is the conception of continuous vocational education and training.
- There is the long-term cadastral conception approved by the Government, which is, step by step, fulfilled (both tasks and conditions needed, including financing).
- The descriptive cadastral data are fully digitised.

- The digitisation of cadastral map is in progress (nearly 20 % of area finished).
- Quite new cadastral software of new generation have been tested and is under implementation.

Due to the international help within the PHARE scheme, from the Swiss Government, and co-operation with institutions and companies from abroad, it was possible to accelerate the whole project considerably. It seems that all we need now is some twenty years of political and economical stability.

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