

SOME REFLECTIONS ON COMPUTERIZATION OF LAND REGISTRY WORKS

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Rezumat

Articolul abordează problematica informatizării lucrărilor de carte funciară. Autoarea examinează modalitățile de realizare a automatizării operațiilor de carte funciară, inclusiv în alte state și exprimă tendințele existente în materia analizată.

Cuvinte cheie: *informatizare, carte funciară, cadastru, corp de proprietate, principii*

Abstract

The Article approaches the issue of computerization of land registry works. The author examines ways to achieve automation of land registry operations, including other states and also expresses the existing trends in the analyzed area.

Key words: *computerization, land registry, cadastre, legal land object, principles*

1. Preliminary. Explanations

In the concept of the Law on cadaster and on real-estate publicity¹, the land registry and cadastre form a uniform and mandatory system of technical², economic³ and legal⁴ record, of national importance, of all real estate

¹ Law no. 7/1996, republished in Official Gazette of Romania no. 201/ March 3, 2006, amended and supplemented by Government Emergency Ordinance no. 64 published in Official Gazette of Romania no. 451/ July 7, 2010; after the approval of the Emergency Ordinance by law, Law no. 7/ 1996 will be republished in Official Gazette of Romania, giving articles a new numbering.

² See art. 9 par. 1 of Law no. 7/ 1996 as amended and supplemented by Government emergency Ordinance no. 64/2010: Cadastral technical function is performed by determining the boundaries of neighboring buildings, based on measurements. Measurement works are executed by any graphic, numeric, photogrammetric or combined method.

³ See art. 9 par. 2: In the economic function of the cadastre are highlighted the technical elements, which are necessary to establish the taxable value of buildings or, where applicable, contributions or taxes on these buildings.

⁴ See art. 9 par. 3: The legal position of the cadastre is achieved by identifying real estate owners and by registering immovable property in the land book.

throughout the country, having as goals: determining the technical, economic and legal information on the property; *providing real-estate publicity rights on the basis of the documents which have been established*, transferred, modified or extinguished; supporting the tax system and housing market; ensuring *the security of real estate transactions* and facilitating mortgage loans⁵.

The specialty literature⁶ expressed the opinion that real estate publicity covers all legal means provided by law that are publicly determining the legal and financial status of the real-estates, particularly through the records that are kept by state authorities, to safeguard the interests of the holders' real estate rights and insurance-related rights for their circulation according to the law. Real-estate publicity based on the cadastre record system has as object the inscription in the land registry of juridical acts and deeds referring to buildings from the same administrative territory and it is carried out by the territorial agencies for the buildings situated in their activity area⁷.

The cadastre is the system by which the identification, registration, representation on cadastral maps and plans of all land, as well as of other immovable property from the country's whole territory shall be achieved, regardless of their purpose and owner.

2. The need for automatization of land registry operations

The introduction of modern techniques for working in land registry activities is possible without affecting the rigor and accuracy of the publicity activity, and is now a normal thing, contributing to the prestige the system has. By automating the land registry operations can be carried out all operations of land registry from land books preparation (basic data entry and storage) to the management of land books by making changes in their content, to the on-screen research of their content and to issuing extracts and other proofs with a computer printer. Above mentioned are considered all documents: those written (the file of the land registry, the records) and those drawn, graphical (cadastral plans), which are subject to the same rules. Also, the powers of the registrar of land registry and the rules of procedure do not change, are not affected by anything, and documents obtained by listing have the same legal value, the same probative value as the classic ones. In addition, factual changes involved are beneficial because by electronic archiving are replaced folders with thousands of files of land registry, cadastral records and drawings, the

⁵ See art. 1 paragraph 1 of Law no. 7/1996, as amended and supplemented by Government Emergency Ordinance no. 64/2010

⁶ See C. Bârsan, *Drept civil. Drepturi reale principale*, ediția a III-a, Editura Hamangiu, București, 2008, p. 342. (*Civil Law. Main real rights*, Third Edition, Hamangiu Publishing House, Bucharest, 2008, p. 342)

⁷ See art. 17 par. 1 of Law no. 7/ 1996.

cumbersome manner of manual drafting or by using a typewriter. In terms of human resources the classic operator, which is painstakingly recording everything, has as a substitute the modern operator with another training and a different vision in works execution.

Conditions for the computerization of land registry works are related to logistics, namely the cost for the equipment and a proper organizing. Overall, for the introduction and generalization of a land registry informational system are needed:

- The establishment of standard formulas regarding the content and length of the texts required for the inscription and modification of the land registry, the interlocutory judgments, extracts that shall contain only essential data. The condition is feasible because the currently used, results from the practice of over 100 years, are concise, clear and leaves no room for interpretation;
- Modern equipment consisting of a sufficient number of computers with corresponding capacities, also offices with the necessary space and facilities;
- Appropriate software to allow all the operations, adjusted, agreed upon, to those of the cadastre in order to transfer data regarding the material subject (part I describing the property). So, the software must use the same sheet and format, the same mask with standard forms of writing that are used today;
- Appropriate training of registrars of land registry concerning the level of knowledge and the standardization of the work methodology ⁸.

3. Situation in Europe

In UK operates a system of cadastral and legal evidence for real estate. Land Registry is an English governmental organization, created in 1862, currently an executive agency that is responsible for registering rights on land in England and Wales. A similar authority is operating in Scotland, namely General Register Office for Scotland. Land Registry first internet service was launched in early 2005, through which any applicant can obtain information on any property by entering the identification data, by filling in the details regarding paid taxes or requested documents; those who apply for obtaining information will receive the documents downloadable in pdf. format. As being the largest property database in Europe, it supports the economy by creating a certain property protection⁹.

⁸ See N. Boş, O. Iacobescu, *Cadastru şi cartea funciară*, Editura C.H. Beck, Bucureşti, 2009, p. 306.

⁹ See, for details, www.landreg.gov.uk, Land Registry official site.

Similar systems are operating in Sweden (Arken system since 1999¹⁰), Spain (Oficina Virtual del catastro since 2003¹¹) and Switzerland¹².

In our country, the National Agency of Cadastre and Land Registry and its territorial offices is administrating the database of cadastre and land registry integrated system. Electronic consultation of the legal situation of a building can be done by the public by using identification data of the building. Electronic applications for registration and for obtaining information will be recorded and processed with equivalent legal effects. Interlocutory judgment, extracts, copies of documents or plans communications can be made electronically, according to Law no. 455/2001 on electronic signature¹³. In contentious cases, a technical expertise in topographic - cadastral - surveying specialty can be ordered, nominated in the nomenclature of the Ministry of Justice and Civil Liberties; such an expertise is a probative proceeding that is administered when seeking the opinion of specialists in land measurements, opinion that can help to establish the truth.

4. Perspective on cadastre modernization

Analysing cadastral development within Europe can be seen that all countries have land records based on the registration of buildings technical data regarding configuration and measurements, of economic data which serve to determine the legal fees and of juridical data regarding owners, to transaction documents, mortgages, obligations.

Milan cadaster was taken over and improved by the Austrians through the establishment of a cadastre, which is based on property individualization and description. Austrian Cadastral as type of organization is also used by countries like the Czech Republic, Slovakia, Hungary, Romania, England.

In the context of an united Europe, it is important to generalize the principles of developing and maintaining a modern cadastre containing the principles of verification and registration of land in the Austrian system¹⁴.

¹⁰ See B. O. Käck, L. Sundström, *Digital Archives and Document Management in the Cadastral Procedure in Sweden*, XXIII FIG Congress Munich, Germany, 2006, document available on www.fig.net.

¹¹ See www.catastro.meh.es

¹² See J. p. Miserez, *Registration of Public Land Rights and Restriction in a Land Administration System*, XXIII FIG Congress Munich, Germany, 2006, document available on www.fig.net

¹³ See art. 5 par. 4 and 5 of Law no. 7/ 1996, newly introduced by Government Emergency Ordinance no. 64/ 2010.

¹⁴ See L. Oprea, I. Ienciu, N. Ludușan, T. Borșan, L. Dimen, *The management of the cadastral inventory and real estate advertising in international context*, document available on <http://agricultura.usab-tm.ro/Simpo2008pdf/Volumul%202/Seotiunea%206/20%20Oprea%20Luciana.pdf>.

At the International Federation of Surveyors¹⁵ was developed a project to modernize the cadastre, entitled *Cadastre 2014. A Vision for A Future Cadastral System*¹⁶. Two definitions are proposed, namely land object and Cadastre 2014¹⁷, to replace the traditional land parcel and Cadastre¹⁸.

In our country, wide law, the building is for real the land object, registered and described in Part I of the land book, entries in Part II and III are concerning the land object described in Part I.

The property registered in the land registry can be modified by merging, detachment or by increasing or decreasing its extent¹⁹.

Merging occurs when two or more plots come together in one building or when a new parcel is added to a property. When connecting two or more parcels into one parcel, they must be located side by side. The new land object will be registered with a Roman number.

Detachment is achieved when separating a part of a property. Detachment is made, unless otherwise agreed, with the obligations imposed on the property.

¹⁵ The International Federation of Surveyors, was founded in 1878 in Paris. It is a federation of about 100 national associations and is the only international body that represents all surveying disciplines. It is an UN-recognized non-governmental organization (NGO) and its aim is to ensure that the disciplines of surveying and all who practice them meet the needs of the markets and communities that they serve.

Aware of the need for change in the cadastral domain and of the efforts in cadastral reform, initiated at the Melbourne 1994 FIG Congress by its Commission 7 the Working Group 7.1. The terms of reference for this Working Group were to: Study cadastral reform and procedures as applied in developed countries, take in consideration automation of the cadastre and the role of cadastre as part of a larger land information system, evaluate trends in this field and produce a vision of where cadastral systems will be in the next twenty years, show the means with which these changes will be achieved and describe the technology to be used in implementing these changes.

¹⁶ See J. Kaufmann, D. Steudler, *Cadastre 2014. A Vision for a Future Cadastral System*, article presented at FIG Congress, Brighton, 1998, document available on www.fig.net.

¹⁷ Definitions of *Cadastre 2014. A Vision for a Future Cadastral System*

Land Object: A land object is a piece of land in which homogeneous conditions exist within its outlines. The legal land objects are described by the legal content of a right or restriction and the boundaries which demarcate where the right or restriction applies. The new cadastre shall comprise not only the land parcels but all land objects in a defined area:

Cadastre 2014 is a methodically arranged public inventory of data concerning all legal land objects in a certain country or district, based on a survey of their boundaries.

So, a „land object” is the print of a building or land, and a „legal land object” represents the juridical print of the building or land, which includes the rights and restrictions given by that building or land to the owner or to third persons.

¹⁸ Traditionally, a land parcel is a piece of land with defined boundaries, on which a property right of an individual person or a legal entity applies; and cadastre is a methodically arranged public inventory of data concerning properties within a certain country or district, based on a survey of their boundaries.

¹⁹ See art. 42 par. 1 of Law no. 7/1996.

For the preparation of the cadastral documentation for land consolidation or detachment in at least three plots, the town planning certificate is required²⁰. Specific regulation of urbanism certificate requirement was imposed by the fact that authorized cadaster specialists did not comply with the provisions of the General town planning regulation²¹, approved by Government Decision no. 525/1996²², on the opening to the street of the lots, the surface of the lots, the width of servitude roads (real streets with one lane, where the cars of firefighters, rescue, gas companies, sanitation and other companies of public interest can't enter), lack of access to public road, don't showing protection zones²³.

In case of merging and detachments will be made, if necessary, transcription or re-enrollment operations. Transcription is made when a property is passed from one land registry to another land registry. If all property registered in the land registry has been transcribed, it will close and will not be reopened for new entries. Re-registration takes place if, only a part of the property is transcribed in another land register, the rest goes in the old land register, indicating the new cadastral number²⁴.

The two concepts (land object and Cadastre 2014) represent the basis of the six principles of the future Cadastral System:

a) Cadastre 2014 will show the complete legal situation of land including all rights and restrictions

Any legislation regarding issues of space is aiming land objects, which must be defined, verified and stored in the public register. Legal guarantee is equally important for governments, administrations and economies, but also for individuals and landowners; lack of it could lead to uncertainty, mistrust, disorder, and finally chaos. This means that citizens lose confidence in the institutions of the country, the land market as an essential part of the economy stops working and the whole system can collapse, such effects can be observed in different regions of the world.

²⁰ See art. 29 par. 2 of Law no. 350/2001 on territory and town planning, published in the Official Gazette of Romania no. 373/ July 10, 2001, amended and supplemented.

²¹ See, for details, Gh. Dobrican, *Discuții în legătură cu unele modificări și completări aduse Legii nr. 350/2001 privind amenajarea teritoriului și urbanismul prin Ordonanța Guvernului nr. 27/2008, precum și prin Legea nr. 242/2009 de aprobare a acesteia*, in „Dreptul” no. 5/2010, p. 131 and following ones.

²² Re-published in the Official Gazette of Romania no. 856/ November 27, 2002.

²³ See Gh. Dobrican, O. M. Dobrican, *Discuții și propuneri privind obligativitatea emiterii certificatului de urbanism pentru unele operațiuni notariale*, in „Dreptul” no. 10/2008, p. 118 and following ones.

²⁴ See art. 43 par. 1 and 2 of Law no. 7/1996.

Future cadastres correct this risky situation by applying cadastral systems to the land object, which have to be carefully defined, checked and recorded. This future legal land documentation of the juridical-financial situation must respect the principle of judicial independence.

The various bodies of ownership must be arranged in accordance with the laws that define them. This structure allows immediate adaptation of the cadastre to the developing legislation. There is no need to rearrange the information. New subjects can be simply added by including a new layer of information. Therefore, future cadastral systems are not based on plots, but take into account the different land objects, defined as geographical objects in a common referential system. To analyze the impact of restrictions on a particular parcel of land, land objects are compared in geographical terms using overlap technique when it is required.

b) The separation between maps and registers will be abolished and a single product shall be provided

Due to information technology (IT) land objects can be directly linked to the information needed for registration. Land objects can be described in future by geographical and alphanumeric parameters, the latter including the legally relevant records.

c) The creation of cadastral maps will end and complex metadata modeling will pave the way encompassing information from maps and records

Modern information technology based on the cadastre will have a strong impact on the way of working with electronic data and shall provide metadata on the land objects. Maps as analog representations will lose their function of information "warehouse"; their only purpose will be to represent information in order to communicate it easily and in a more comprehensive form. A simple storage on a computer of image maps is an archaic operation. In future graphics representations will be more and more diverse, as extracted from the cadastral model created to meet the needs of a particular customer.

d) Paper and writing instruments will be dropped in this field, all products will be computerized

Information technology, facilitating daily activities, is used to operate cadastral systems, giving up the traditional methods.

e) The globally trend is to privatize Survey, following that the public and private sector work together

This is a fundamental trend, the public sector will have to provide secured cadastral titles, but will outsource the majority of operational work and will focus on supervision.

f) Costs for Cadastre 2014 will be reduced

Operations carried out by both public and private sectors have a cost, and will be covered by cadastral taxes; in several cadastral systems was proved that costs are lower, which implicitly means cheaper services for beneficiaries²⁵.

5. Conclusions

Cadastre 2014, based on the principles of traditional cadastre, is applicable to land objects through information technology and data modeling, and provides a complete and modern image of all land objects, taking into consideration the principle of judicial independence, ensuring the flexible operation of the cadastral system.

²⁵ See, for details, J. Kaufmann, D. Steudler, *Cadastre 2014. A Vision for a Future Cadastral System* supra cit.