

OPTIMIZING THE LEGAL CADASTRAL REGISTRATION OF LAND BOOKS AND CREATING THE SPECIFIC DATABASE

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Abstract: *Since the earliest times, people have felt the need to record the different information regarding the activities considered to be of maximum importance. Man’s most emphasized property was land, as it presented a special interest not only for the landlords, but also for the form of state organisation in order to collect taxes. Considering the current status of the Land Book, the fast evolution of high technology and especially the high number of real estate transactions, one of the main directions for the development of a modern IT application is national development and creation of a web site that all users can access and where they could find information on the legal status of a real estate, irrespective of their location.*

Keywords: *record keeping, cadastre, Land Register, optimisation, database*

1. Introduction

The property right is a fundamental right of the natural or legal persons. The Romanian Civil Code defines property in art. 480 as follows: “Property is the right of an individual to dispose of a thing in an exclusive and absolute manner, but within the limits set by the law.” The Romanian Constitution, the fundamental law of our country, guarantees this right to all Romanian citizens.

The computer era has opened a new gateway for database creation and management. Therefore, specialized languages have been designed to create and complete this organised mechanism for storing, manipulating and extracting information. In the different languages of designing a database, it is not difficult to collect, to structure and to keep them. However, the most important problem is that of coming up with a relational model between these data and the way in which they are presented. The principles of the relational model were presented for the first time by E. F. Codd, Ph.D., who, in June 1970 published a paper entitled “Relational Model of Data for Large Shared Data Banks”. Codd proposed a “relational” model for database systems in this paper.

2. The history of cadastral activity

The earth is the most important resource of humanity, without which, life would not exist, but on which our existence and evolution depends. In Romanian law, the real estate is defined to be “ius utendi et abutendi re sua, quantum iuris ratio patitur” which means that it represents the right to use a thing in personal interest, but within the limits of the law.

In concordance with the own system of evidence of each country, the registration of property rights is made in one or more known registers like "Real Estate Book".

The model of all cadastres in Europe is represented by the first modern cadastre drawn up by the principality of Milan, known under the name of "Censimento Milanese" during the time when Milan was under the Austrian occupation. The measurements started on April 17th 1720 in a festive frame at Melegnano, at 25km sud – west of Milano under the governance of mathematician and engineer Johan Jacobus Marionioni and having clear technical instructions.

The English economist Adam Smith (1723-1790) the founder of modern political economy stated "The Milan cadastre principality started under Karl VI, is considered to be his most exact and with the most attention regarding a paper in the field which has never been made."

The Milan cadastre was borrowed in French under the Napoleon Bonaparte and then in Belgium, the Netherlands, Luxemburg, Westfalia, Rheinland, Bavaria the Swiss cantons Vaud and Geneva and in whole Austro Hungarian Domination, which has developed later to become the best cadastre system of that time. The English economist Adam Smith (1723-1790) the founder of modern political economy stated "The Milan cadastre principality started under Karl VI, is considered to be his most exact and with the most attention regarding a paper in the field which has never been made."

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3. The evolution of cadastre in Romania

Regarding at the evolution of the activity of the cadastre in Romania has known a series of stages emphasized by the historical and political evolution of the country:

- The pioneering stage of the cadastre in the Romanian regions, a stage in which the cadastre's activities, together with the land register began in 1794 in a part of the Romanian territory according to the system used in the former Austrian-Hungarian Empire;
- The stage after World War I (1919 – 1933), when the cadastre activity was limited to measuring the estates and turning them into parcels of land for the appropriations of land that were done after World War I;
- The stage of the beginning of the modern agricultural cadastre and of the unification of the Land Register (1933 – 1955) given by L23/1933 concerning the organization of a general cadastre and a modern land registration;
- The stage of the systems of land registration and land cadastre that starts in the year 1955 once the Decree nr. 280/1955 and the Government's decision nr. 1240/1955 showed up concerning the organization and the execution of the „land registration” mainly in order to serve for the fusion of the agricultural lands during the action of collectivisation of agriculture;
- The modern stage of the cadastre, a stage when all the staff of the cadastre units was involved in applying the Law nr. 18/1991 concerning the re-instatement of properties.

The Land Registers were issued as the government wanted to create a rigorous and complete registration system concerning the material and legal status of the land over which it had authority. By founding the Land Registers, a land registration was realized, based on the topographic identity of the buildings and it reflected both the material and the legal status of the lands. From the evidence of the registration in the land registers we can establish the way of constituting and conveying real estate rights.

According to the article 21 from the Law nr. 7/1996, in the Land Register we can see both the property right and the rights of superficies, usufruct, use, habitation, easement, the mortgage right and real estate privileges, and according to the article 39 from the Law nr. 219/1998 we can also find in the Land Register the concession right.

The recording of the rights in the Land Register has an opposable effect compared to third parties since the date of the recording application. The order of the recording of the application will determine the degree/rank of the registration as well, as it is specified in the article 27 in the Law nr. 7/1996, and the registration is done using the name of the owner.

4. Management of cadastral and land registration services in Romania

The National Agency for Cadastre and Land Registration developed the “e-Terra” application in order to better manage its services.

The “Registry” (RGI) module is one of the three main modules of the integrated Cadastre and Land Registration “e-Terra” System, the purpose of which is to computerize, automate and optimise the registration flow of applications in the Cadastre and Land Registration offices.

The Registry module accomplishes a management of the applications addressed for supplying cadastre and land registration. The applications that are introduced in the system receive a number and a registration date, and their resolutions are further observed in the system.

What is very important is the fact that the application offers security on an access level; thus, the submenus are active (available) for users, according to the rights established for the type of function it has.

The management of the land book operations materialized by the “SIGCF” application represents an information system, with the help of which the existent documents in the archive will be analysed. In order to use the ANCPPI application, the user has to access the specific connection in order to download the main page of the application. The first thing the user has to do is to authenticate himself by a “User” and a “Password”.

5. The optimization of the legal cadastral registration of land books

The concept of “Individual Land Book”

When analyzing the manner in which a database is constructed, we are faced with the fact that the primary key values defined for the database tables must be singular. Thus, we encounter the issue of Land Book singularity considering that the rule for numbering Land Books is from 1 to n for land outside of the built-up area of an administrative territory and 1-n for land inside of the built-up area of the same administrative territory. This requirement is met by attaching a singular primary key, namely the SIRUTA code (which is unique for the land outside and inside the built-up area of an administrative territory), to the Land Book number.

Thus, the need for an “Individual Land Book” as: “the attribute of a Land Book that gives it a singular character on Romanian soil”.

E.g.:

- Land Book no. 1758 from Alba Iulia will become Land Book no. 1026_1758, which is singular in Romania;
- Land Book no. 1758 from Petroșani will become Land Book no. 87004_1758, which is also singular in Romania.

The concept of “Individual Estate Item”

The need to define the above notion resides in the fact that one Land Book may contain under the same current number several parcels which together, form an estate item. The singularity of this number results from an “invisible” assigning of the Individual Land Book Number to the

number of the real estate item. “Individual Estate Item” is “an attribute of the Estate Item which gives it singularity all over Romania”.

E.g.:

- The real estate item registered at no. A+1 in the Land Book no. 1758 in Alba Iulia will become 1026_1758_1, which is singular in Romania;
- The real estate item registered at no. A+1 in the Land Book no. 1758 in Petroșani will become 87004_1758_1, which is singular in Romania;

The concept of “Individual Owner”

Due to the many coincidences regarding the owners’ names, it was mandatory to introduce the concept of “Individual Owner” in order to have a sure identification in case the database query is run by the owner’s name.

As in the case before, an “invisible” number is assigned to the owner, which is the Personal Identification Number for natural persons or the SIRUES code for legal persons. This “invisible” number appears in the database, but is not printed in Land Book Excerpts (for information or authentication).

6. Microsoft Access – computer software for registering Land Book operations.

The main element on which this database is based is computer use. Thus, the current Land Book registration system can be turned into a computerized system, which will ensure a double registration system-an analogical and a computerized support.

Before creating the computer software, data structures are required which may lead to generate the application “lb.mdb” and their distribution to the Land Book registries will lead to the generation of the following reports:

- Land Book;
- Registry of parcels;
- Registry of Land Books;
- Alphabetic index of owners;
- Registry of special cadastre units (mining, archaeology, natural reservation etc.).

Introducere / Editare date

Nr. inregistrare: 1 Judet: JUDETUL ALBA Tip CF: Definitiv Adresa proprietar: sat Dumitra, nr. 80, judetul Alba

Teritorial administrativ: SANTIIMBRU Numar CF: 595 Adresa imobil: sat Dumitra, nr. 80, judetul Alba

Localitate: DUMITRA Istoric: 7419_595 Cautare dupa numar CF: []

Foiaia A

7419_595 7419_595_1

Cod A	Corp proprietate A	Nr. cadastral	Nr. topografic	Descriere imobil	Suprafata (mp)	Nr. cadastral prov.	Obs. foaia A
▶ 7419_595_1	1		444/1	arator "la cruce"	1385		B1
* 7419_595_1							

Record: 1 of 2

Foiaia B

7419_595 7419_595_1

Cod B	Corp proprietate B	Nr. ordine B	Nume / Denumire proprietar	CNP / Sirues	Cota indiviza	Modalitati de dobandire
▶ 7419_595_1		1	Oprea Nechifor		1/1	contractual de donatiune din...
* 7419_595_1						

Record: 1 of 1

Foiaia C

7419_595 7419_595_1

Cod C	Corp proprietate C	Nr. ordine C	Dezmembraminte	Ipoteca	Alte notari C	Obs. foaia C
▶ 7419_595_1					Cu imobilele A	
7419_595_1		1	uzufruct viager		asupra 1/4 p a	
7419_595_1		2		prezent l:	Se intabuleaza: 47	

Record: 1 of 1

Cartea funciara Registru parcelar Registru de evidenta CF Indexul alfabetic al proprietarilor

Fig. 1. Introduction/Edit data in "Land Book" application

Securing the database implied setting the correct security level for each type of database user. The security degree is determined by the importance of the data that need to be stored and by the type of users accessing databases: those who create applications, database administrators and the users of the end product. The person who creates this database has access to all the database sources, including the software's source code while the database administrators can only access the introduction and query of data.

7. Conclusions and proposals on the advantages of using IT for Land Book record keeping

The development of an optimized database of the Land Book will have a good impact due to the complexity of the field and of the directions to be developed and to the lack of IT technologies in this field. The gradual implementation of a information system that is in tight connection with the cadastre system for data receiving and sending is a necessity for a modern and efficient land registration system.

Also, when the property is described, the extra fields "Special destination" and "Topical designation" made it possible to generate registries specific to specialty cadastres (mining cadastre – exemplified in the application) and the possibility of generating a series of registries for the lands included in the national heritage list (archaeological sites, historical monuments, nature reserves, etc.) so that all these areas can be identified from the viewpoint of cadastre and they should be introduced in the Romanian general cadastre.

Registrul Unitatilor Miniere

JUDETUL ALBA						
<i>Teritoriul administrativ</i> SANTIMBRU						
<i>Localitatea</i> COSLARIU						
<i>Nr. CF</i>	<i>Denumire topica</i>	<i>Proprietar</i>	<i>Descriere imobil</i>	<i>Suprafata</i>	<i>Nr. cadastral</i>	<i>Nr. topografic</i>
422	Cariera Sloboda	Marcu Maria	Arator	760		93/1
422	Cariera Sloboda	Marcu Maria	Casa si curte	494		92/1
<i>Localitatea</i> DUMITRA						
<i>Nr. CF</i>	<i>Denumire topica</i>	<i>Proprietar</i>	<i>Descriere imobil</i>	<i>Suprafata</i>	<i>Nr. cadastral</i>	<i>Nr. topografic</i>
122	Cariera Grui	Oprea Maria	erator intravilan	630		91&/1
122	Cariera Grui	Oprea Ion	erator intravilan	630		91&/1

Fig. 2. Registry of mining units

In the EU context, it is not without significance to generalize the principles to create and maintain a modern cadastre that encompasses the long-time experience of verifying the principles of cadastre and of the Austrian Land Book. Thus, all over Europe, there should be unitary cadastral evidence by identifying real estate items and attaching the country code in order to have a modern European cadastre.

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