

## PROPOSED SOLUTIONS FOR A TEXTUAL STRUCTURED DATABASE RELATED TO THE DATA PROVIDED BY THE GENERAL CADASTRE

Costinela PÎRVAN, Assistant – „Gheorghe Asachi” Technical University of Iași, România,  
[costinelapirvan@yahoo.com](mailto:costinelapirvan@yahoo.com)

Anca Alina LAZĂR, Assistant – „Gheorghe Asachi” Technical University of Iași, România,  
[anca\\_danut@yahoo.com](mailto:anca_danut@yahoo.com)

**Abstract:** *The paper presents a conceptual model for compiling a textual structured database related to the data provided by the general cadastre, in the hypothesis of introducing systematic cadastral works. The structure of the textual database suggested by the authors, is based on data provided by cadastral technical documents. The systematic cadastral works are introduced automatically on the integrated cadastre and land registry system, all the land parcels within a territorial administrative unit or a cadastral sector. This fact makes that in all the technical cadastral, all land parcels to be uniquely identified within that territorial administrative unit, by the cadastral number (ID).*

### 1. General aspects regarding the integrated system of cadastre and land registry

The integrated system of cadastre and land registry records provides the inventory of cadastral sectors by technical, economic and legal point of view inside the territorial administrative units (town or village). In the integrated system of cadastre and land registry, each land parcel is graphically represented on the cadastral plan through a closed polygon, which has assigned a unique identifier (ID) that connects to the text database represented by the book of the land parcels. Information, both graphical and textual ones, are generated using standardized files (XML structure), governed by ANCPI, in order to have a unitary record system of data for technical, economic and legal issues regarding the land parcels.

Currently there are covered two ways of achieving of the cadastre and land registry system in the administrative-territorial units: a systematic and sporadically way. One of the principles throughout which the systematic cadastre is being realized is covered in Order no. 1/2014 given by the General Director of A.N.C.P.I "principle of mass registration of properties as shown by the reality on the field". Thus the systematic land registration is recorded automatically on the integrated cadastre and land registry, all land parcels of a territorial administrative unit or a cadastral sector, while in the sporadic land registration, land parcels are recorded by request.

Due to the achievement of the two types of recordings it is evident that systematic way land parcels will all receive that unique identifier throughout the administrative-territorial units (ID) according to their position in the cadastral sector, which will coincide with cadastral number of land parcel. In the sporadically way only the requested land parcels will receive cadastral numbers (provisional) in the order of records.

## 2. Making the textual database related to the data provided general cadastre

According to Law 7/1996 subsequent amendments in Article 2 paragraph (1) states "cadastre is being accomplished at the level of territorial administrative units by cadastral sectors" and in Article 12 paragraph (1) " the cadastral technical documents shall be prepared for each cadastral sector [...]". The technical documents are: the cadastral plan, the cadastral register of land parcels and the alphabetical list of property owners, land holders and other possessors. The textual database structure of the general cadastre, proposed by the authors, is based on data provided by cadastral technical documents.

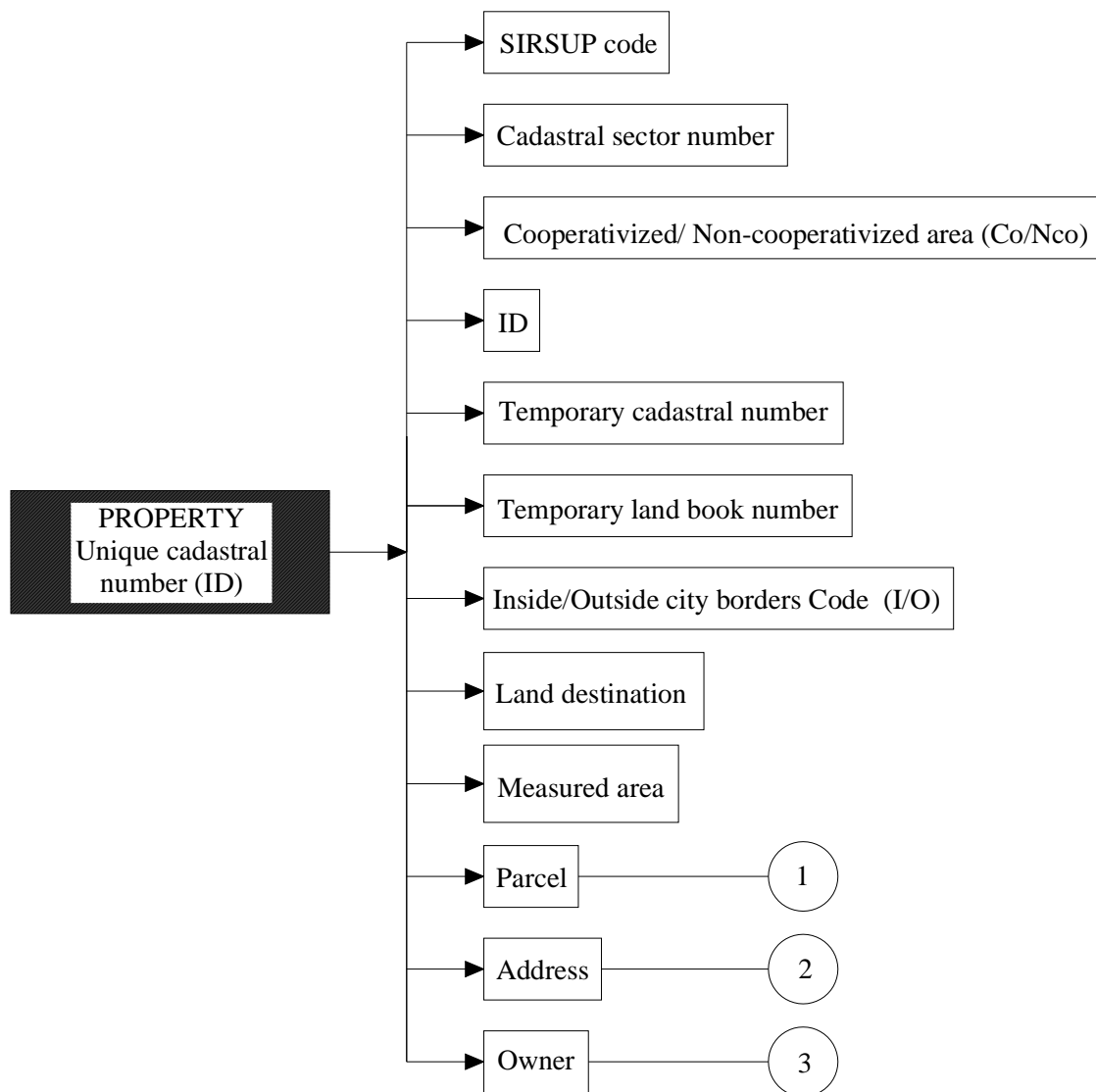


Fig. nr.1 The structure of textual database attached to the land parcel

The entity on which the textual database structure linked to the data provided by the general cadastre stands on is the land parcel, because all technical cadastral documents

uniquely identify, within the territorial administrative unit, the land parcel by the cadastral number (ID). This is the number that the property will receive in the cadastral numbering works within the cadastral sector buildings in this sector. From graphical representation point of view the land parcel is a geometrical entity which has attached more features (attributes) in figure no. 1.

The structure proposed by the authors for textual data related to the properties includes, among others:

- The number of the cadastral sector, which is the number that the cadastral sector receives by numbering all sector cadastral sectors within the territorial administrative unit to achieve systematic cadastre that will be unique across that territorial administrative unit;
- Because the borders of the land parcels (and the area) which are positioned outside city borders within the territorial administrative unit are established in different ways in the cooperativized and non-cooperativized areas is necessary to clarify this issue;
- To link to databases related sporadically cadastre it is necessary to have the temporary given cadastral number and the temporary number given to the book of the on request.

The structure of the textual database (proposed by the authors) corresponding to the land parcels is shown in figure no. 2.

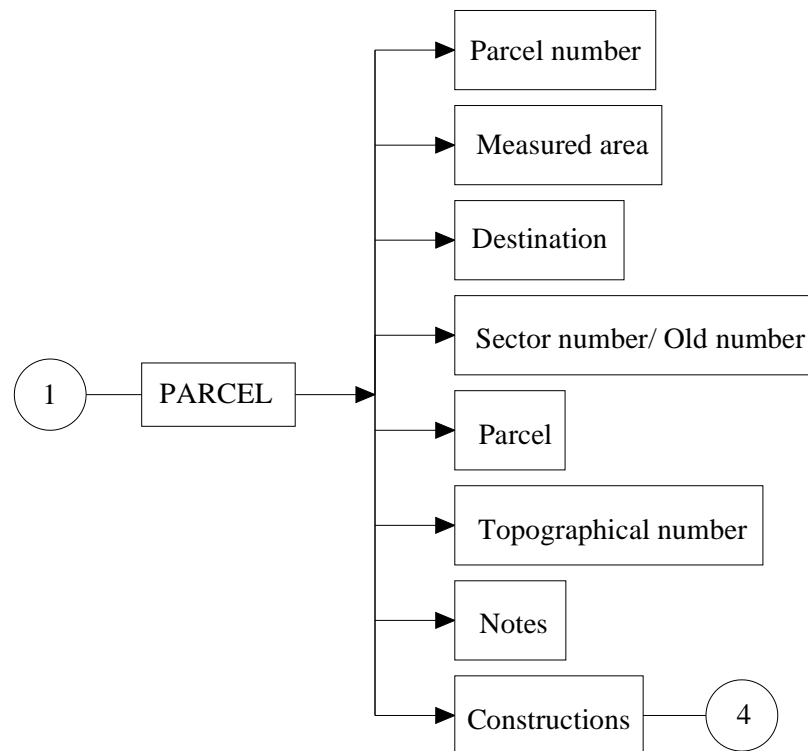


Fig. nr. 2 Structure of textual data attached to the land parcel

The database includes all the data from the general cadastre by achieving the systematic cadastral works. Thus:

- The parcel number is the number that parcel will receive inside the property;
- The parcel is also represented by the number it had in the old cadastral evidence before achieving the general cadastre;

- The particulars regarding the parcel refer to fence surrounding or without fence surrounding or its enclosure.

Figure no. 3 presents the structure of the textual database associated to the address of the property, the address of the owners/possessors, or the address of the company in the case of corporate owners.

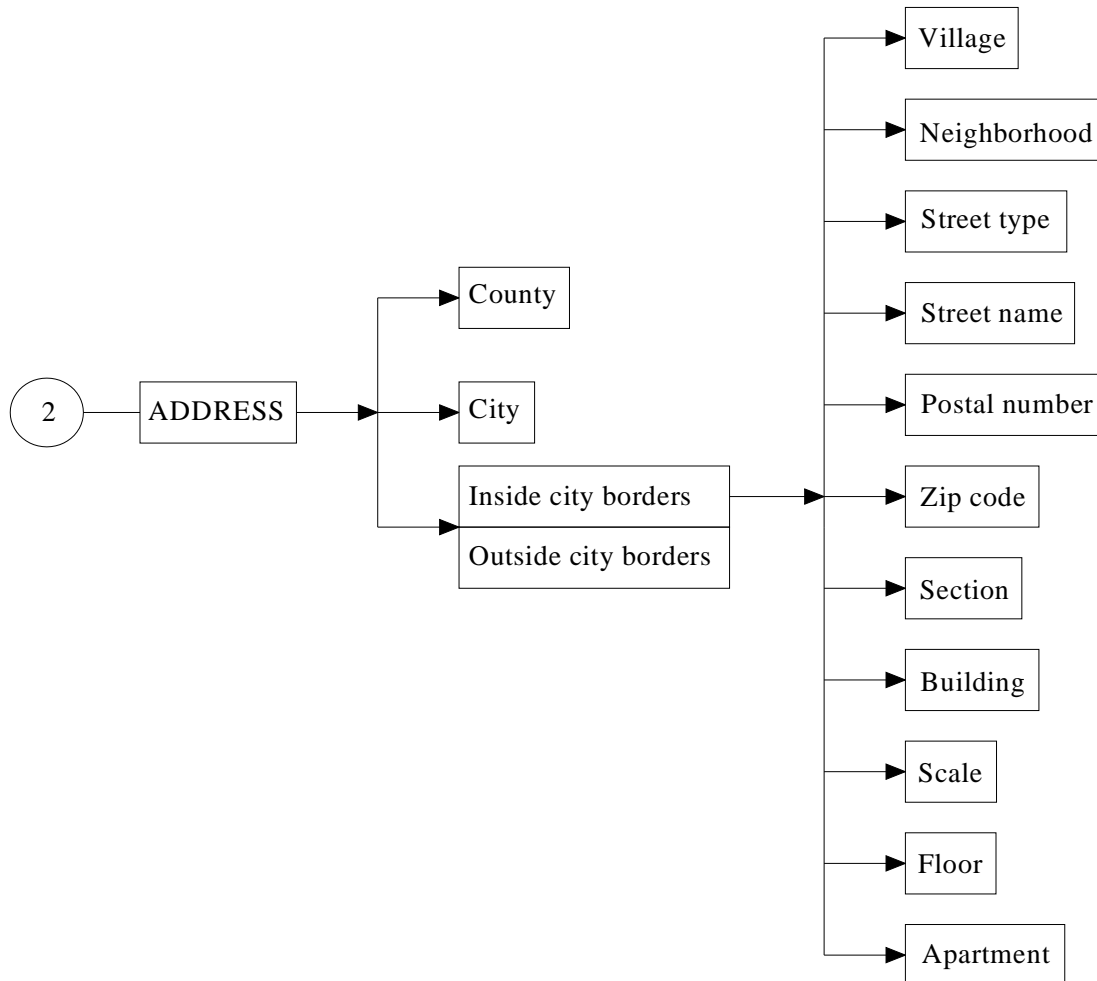


Fig. nr. 3 The structure of the database attached to the address

Figure no. 4 presents the structure of the textual database related to the owner or possessor.

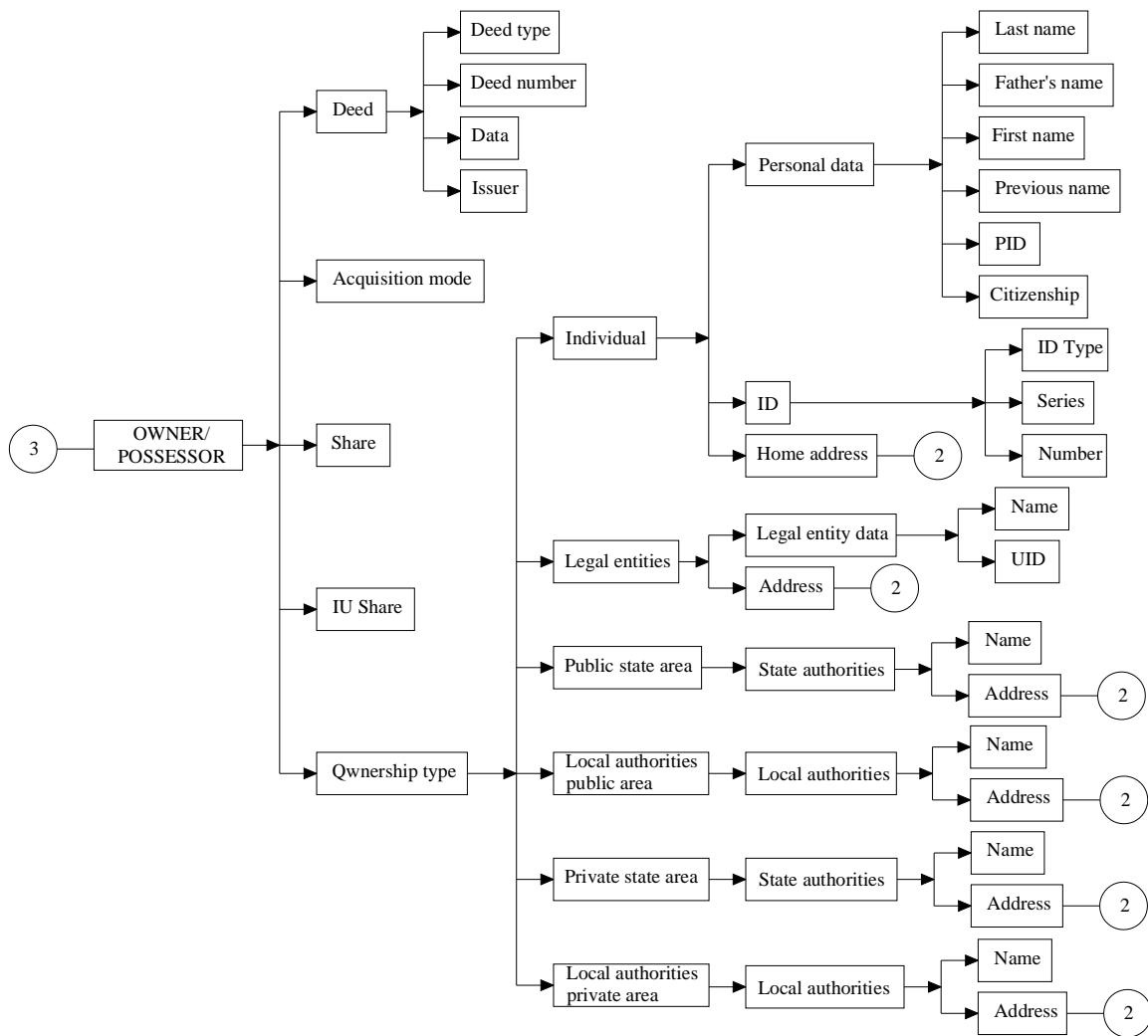


Fig. nr. 4 The structure of the database attached to the owner/ possessor

The structure of the textual database (proposed by the authors) related to the constructions is shown in figure no. 5 and includes among others the identifier code of the construction, which is composed by the construction code (C) followed by the number given within the property.

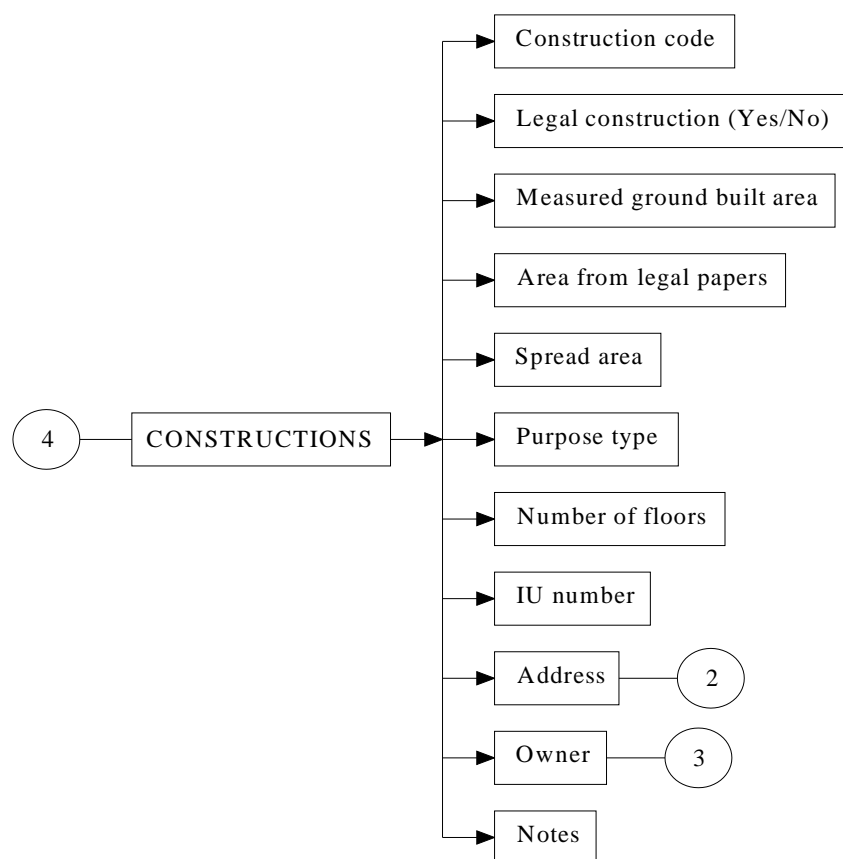


Fig. nr. 5 The structure of the database attached to constructions

### 3. Conclusions

It is necessary to make systematic cadastral works in Romania because they involve default registration in the integrated cadastre and land registry system of all land parcels within an administrative-territorial unit or a cadastral sector, in accordance with the onsite reality;

By recording all the land parcels in the integrated cadastre and land registry system, each land parcel receives a cadastral number (ID) unique within that administrative-territorial unit, which will be the unique identifier of that land parcel in all cadastral technical documents and databases containing information about land parcel, owner / possessor, etc.

### 4. References

1. Pîrvan C., Documentary study over geographic information systems for hydroameliorative works, Report No. 1, Technical University "Gheorghe Asachi" of Iasi, Iasi, September 2014;
2. \*\*\* Law no. 7/1996 of cadastre and land registry;
3. \*\*\* ODG no. 1/2014 Technical specifications.