

# **The Stage of Geoinformatic Involvement in Cadastral Data Management in Romania – Present and Future Tendencies**

**Mugurel ENACHE, Romania**

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## **SUMMARY**

The introduction of Cadastre 2014, as well as European Union adhesion, are two major necessities of our country, in the view of law alignment at international standards. If until 1989, the only lands owner in Romania was the state, in the last 14 years, radical changes concerning the ownership titles and free circulation of grounds, as well as those destination change, has occurred.

Otherwise, it is known that within any form of leadership, soil is the most valuable richness that can exist and, that's why, there must be held a strict and clear evidence, both quantitative and qualitative.

A classic evidence, “on paper”, is very difficult to achieve, and more difficult to maintain and support, in condition of “dynamic” changes because of the amplitude of changes and free circulation of grounds. Once again, informatics is present, completing and supporting this domain. At the same time, it is necessary the forming and education of specialists, that are going to successfully mix the traditional techniques with the modern ones, both in cadastre realization and its maintenance.

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## **1. THE PAST**

Until 1989 entire propriety of Romania was dedicated to a single owner, the state. Because this situation, all propriety titles was none, the state, the single owner no needing a property title. This situation was from 1955 – 1965, when the comunists has made “The Collectivization”, when all the lands owner was forced to give up the property to the state. After 1990, the major propriety was returned to the people. From this moment, all situation linked to a land, a land’s resources and everything looks like a big disorder. In parallel, all old land measurment needing a new verification to maintenance. At same time, the market of land knows a development, the circulation of the lands being now absolutely free. The permanent changes of the owners is a great problem for institutions with atributes in registration of owners and land evidence, in several cases the evidence being on papers. Is knewed that, the work with paper is many times very hard, espacially when thousands changes is needed to be processed in a short time.

## **2. THE PRESENT AND ACTUAL TENDINCIES IN GIS**

In the last ten years, the computers and the soft industies has a great development, of course, linked one to each other. This tehnology, many times called generic “informatic” had involved in a many domains, sometimes, in some domains being indispensable. And the cadastre have, now, many problems resolved using the computers. All data collected from a terranin must be analysed, processed and stored in databases in a strict order. Then, to this database must be associated dates from other domains such juridic, economic and even touristic. In this way, the complexity of a such databases will be great.

The Geographic Information System technology (known as GIS) is about over 20 years old. In most part, people are still using it only to make maps but GIS can do much more. Thus, using GIS technology for analysis, we can find out what things are related, where and how. GIS analyses are very important for people to mapping density, finding what’s nearby, mapping changes, finding some places to accommodation in a city, finding a street or a objective to visit, keep a strictly evidence of a agricultural lands, forest, evaluation for a land and many more, things which is impossible or very hard to made without a computer and some data collected as we know about.

Geospatial information handling is a very hard profession to maintain and keep up-to-date numerous applications, including government service and private business sectors. Anyway, is easier to handling geospatial data from a computer comparative with handling of a lot of papers, maps and other papers. The GIS aids many more the cadastre (another very important

science) to planning any future action over lands. Is very clear, the issue of Geoinformatic is to help many domains, involving deeper.

Because this, many organizations is now on the finish point to building their databases. It's a long process, but will be faster with a huge amount of geographical data. Thus, in major states of Europe, the cadastre is build using GIS technology.

### **3. THE FUTURE IN GIS. ADVANTAGES OF USING GIS TECHNOLOGIES**

The introduction of Cadastre 2014, as well as European Union adhesion, are two major necessities of Romania, in the view of law alignment at international standards. But, not only the laws must be alignment to other countries but also the databases must be aligned, to a simply exchange in a future between countries and global acquisition data.

At this time, Romania works much to finalising the databases with GIS information. With the right data we can see now not a white zone on digital maps but also lands, elevation, climate zones, forests, population density, per capita incoming, land use, land resources, mineral resources, tourist zones, whatever we are interested.

Romania had and still has a great tourist potential, which can be used through the GIS databases. How? It's very simple. A tourist which wants a room for accommodation search on the internet, on a government site, dedicated, based on a daily updated database and see how many places is in x hotel, or y hotel, the price, the distance between the hotel and the tourist attractions, the placement of the hotel, the shortest route until them and many more. The geographical data is simple. Once added, them remain the same for years. But not even economical dates is not hard to introduce. Each hotel or any other accommodation place can update him economical data daily to this database. In other words, this is a free or a cheap advertising.

The GIS database will be useful in the future transaction with land. The purchaser can see the value of a land, destination of this, the neighbourhood, the emplacement of desired land, the exact coordinates, and the altitude, even a photo. To a database can be assigned even a digital photo of a location. The same thing is for building. The GIS can store and other information about the structure such a building year, ex-owners, cadastral number, number of rooms and many more.

The GIS is implicated even in environment protection. Daily we see how the contamination of the industry and other factors affects us. With a digital map we can establish places for a chemical factory or other pollution factor as far as possible from a high people density. A place for a children park can be careful selected, far away from any pollution source, or a road, intensely circulated.

Another advantage of using GIS databases is easy circulation of dates. Is simpler to send a CD or a DVD with dates to other users or storing them on a internet server, where anyone is interested can be self informed.

Once the GIS databases will be builded, another job will beginning: the maintenance of them. The updating, as part of maintenance, will be easier if the building was right. For this job, our country needs the specialists, which will work with this databases, to update, interrogate, analyse and maintain them. In the past ten years, in Romania was created some faculties. One of them running in Galati, in “Dunarea de Jos” University of Galati. There, the students studies to work with a large variety of GIS software, like ESRI and Autodesk products.

#### **4. CONCLUSION**

So, we saw that the GIS is very useful for all the people. The development of this will be accelerated in the next years, thorough with greater information need of the future generation. The future is a future of information, analyses and more thinking before any decision, and the geoinformatic will be in this sense helpful.

#### **CONTACT**

Ioan Stangu and Mugurel Enache  
“Dunarea de Jos” University Galati, Romania  
Cadastre, Environment Management and Protection Department  
102 Domneasca Street  
800201 Galati  
ROMANIA  
Email: [istangu@ugal.ro](mailto:istangu@ugal.ro), [mugurel.enache@ugal.ro](mailto:mugurel.enache@ugal.ro)