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Property Registration in Albania: An Information Management Issue

Romeo Sherko and Naim Sula



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PROPERTY REGISTRATION: AN INFORMATION MANAGEMENT ISSUE

by

Romeo Sherko and Naim Sula

International Computer Company, Albania

This paper will present how plans are being made in Albania to establish an immovable property registration system in the most efficient way, considering not only technically modern equipment and computer-related problems but also social and economic feasibility.

1. PRESENTING THE REGISTRATION INFORMATION SYSTEM MODEL

1.1. IDENTIFICATION OF THE NEED

In Albania, everybody agrees that the immovable property registration system is a necessity in order to face successfully the new conditions of the free market-oriented economy. Geographic information systems, the first phase of which in Albania will be the registration system, are just beginning to be accepted worldwide. Studies show that the majority of information used by various organizations is geographically referenced.

For about 50 years, property ownership in Albania was restricted to only the State. The 1991 land reform in Albania advanced quickly, and at present over 90 percent of agricultural land is distributed to farmers, though in highly fragmented holdings (totaling an average area average of 2 hectares), creating in total about 1.8 million new parcels registered in the cadastral district offices. In urban areas, housing privatization was also completed quickly, creating about 300,000 new properties in cities, which are being registered in the Hipoteka (deed registry) district offices. The state has retained ownership of over 200,000 properties, including forests and pastures, ex-state farm land, state institution buildings, roads, and the like. Although market transactions in agriculture land are not yet allowed (though enabling legislation is expected to be passed soon), many land transactions have taken place. The housing market is already very active.

Many foreigners will hesitate to invest in Albania if property rights are not yet clear. Conflicts still exist, especially in urban areas, between ex-owners of the land and buildings, and the state or present occupants. Therefore, it is highly desirable that a property registration system be established in Albania as soon as possible. On the other hand, it is equally important to do the planning very carefully.

1.2. INFORMATION COLLECTION AND ORGANIZATION

Up to now, information concerning ownership is kept in various institutions and agencies. Textual information is found in district agricultural cadastral offices, district urban cadastral offices, and Hipoteka offices. Mapping information is found in the Land Research Institute, the Military Topographic Institute, the Geology and Geodesy Enterprise, the Urbanistic Institute, and the Forest and Pastures Institute. The idea of a unified parcel-based registration system proposed since the beginning of the Immovable Property Registration System (IPRS) project has been accepted and these institutions have agreed to cooperate. There is also a decision by Council of Ministers to make all the existing information available for the needs of establishing the registration system. All these institutions will be integrated into a national land-related institution, in order to improve organization and cooperation, to reduce duplication, and to permit cost-effective use of expensive equipment and technology.

1.3. IDENTIFICATION, STATEMENT, AND MODELING

In this section, we will try to present in an orderly fashion those factors influencing the registration system which, in the terminology of Management Information Systems, are the “boundary conditions.”

a. Goal (or output)

As we briefly mentioned above, the purpose of the IPRS project is to have a unified, parcel-based registration system as the basis for a future global information system (GIS), the hierarchical scheme of which is: a central land registration office and district registration offices (maybe one office for two small districts, or two offices for big districts), all of which are to be self-financed. Each office will have registration and mapping information sections with the following essential elements:

- ♦ a series of large-scale maps showing property boundaries, all buildings and structures on the land, and the major natural features;
- ♦ a register or a number of registers containing information on property description, ownership, easements, and obligations for each land parcel (based on parcel, not on buildings, people, or any other criterion);
- ♦ registration will be complete, that is, every parcel of land is displayed on the maps and included in the respective registers;
- ♦ each parcel will have a unique identifier to be used by all authorities dealing with parcel based information;
- ♦ registration will be dynamic, that is, continually updated; and
- ♦ the contents of the registers are public and freely available within reasonable limits.

b. Inputs

The basic information available for agricultural land is based on the data generated during the land distribution process by district land commissions and handed over to the district cadastral offices. In the title deed document there are descriptions of the parcel(s), geographical location, neighbor boundaries, land use, approximate area, the owner's name (in fact, the representative of the family),

the date, and who issued the title. In the same way, information is generated in Hipoteca offices where the people go and record their deeds to apartments and houses. This is a simple registration process, just to certify that person *a* is the owner of property *n*.

The mapping information is kept in different institutions on different scale maps. Many of the maps are out of date, on paper of poor quality, and of low accuracy. The Military Topographic Institute has small-scale maps, 1:10,000, which have been used for defense purposes. The Land Research Institute has out-of-date maps at 1:5,000 scale, which is quite small for highly fragmented landholdings. These are the same maps used by the district cadastral offices. The district urban cadastral offices have poor-quality maps which have not been updated for several years. The Geology and Geodesy Enterprise has acceptable quality maps at a scale of 1:1,000 and 1:500. The Urbanistic Institute also has acceptable quality maps, paper-based, at 1:500 scale for some of the important cities in Albania.

c. Constraints

The basic idea of the initial proposal to create a property registry was to build a modern registration system. But in the attempt to build such a system, step by step, the following conditions, specific to Albania, were encountered:

- ♦ There is generally a lack of experience with private property in Albania since no one had dealt with private ownership for about forty years.
- ♦ None of the land-related institutions in Albania had modern equipment for their everyday work. The mapping was done by manual methods and is paper-based. The registration in cadastral and Hipoteca offices was done manually under conditions of poor quality paper and facilities.
- ♦ Many of the staff that worked in these institutions were not highly trained, and the education available about the concerned fields was very limited.
- ♦ Except for Tirana, the level of computer knowledge in the districts of Albania is nearly zero.
- ♦ One reason we were reluctant to propose the use of the most modern equipment is unreliability of the electricity; electricity is often cut off for many days. Office buildings are also in poor condition.
- ♦ There is no digital information in any cadastral, Hipoteca, or other mapping agency.
- ♦ The land distribution commissions provided poor-quality data on land distribution because of a lack of technical staff for survey and mapping.

1.4. CRITERIA FOR OPTIMUM DESIGN DEVELOPMENT

- a. The basis of all information systems is data. Some of the national and international agencies are suffering already and spending a lot of money making their data compatible with the high speed of changes in technology. We consider it very important to have the data as compatible, easily presentable, transformable, and transportable as possible.

- b. Since all the information is geographically referenced, it is very important that the geodetic network be improved periodically, establishing additional geodetic control points (densification) when needed, and the control points be well protected.
- c. There are several ways to increase the efficiency of computers but perhaps the most important is to have a uniform system for maintaining the data. This can be achieved by:
 - ♦ using a minimal number of letters to store information, so that a greater quantity can be stored;
 - ♦ using a numeric code divided into classes, subclasses, and subdivisions;
 - ♦ having a common understanding as to the meaning of specific words; and
 - ♦ using various numeric codes as the land records system expands in order to provide sufficient uniformity.
- d. During the registration process, planning and preparation for an appropriate GIS should be done.
- e. Since salaries are low, modern equipment technology can be combined with manual ones in a cost-effective way.

1.5. SYNTHESIS AND ANALYSIS

Analysis of the different factors forms the feedback loop around and toward synthesis of other information systems for the IPRS.

- a. **Physical realizability.** The gradual and step-by-step approach proposed to create the registration system and the basis for a future GIS is 100% materially feasible.
- b. **Economic efficiency.** It is known worldwide that the parcel-based registration system, as preparation for a future GIS, is economically efficient and assists various institutions in low-cost decision making.
- c. **Financial feasibility.** Development of GIS in Albania is financially feasible because of development assistance grants given to Albania by international organisms such as U.S. Agency for International Development (USAID), Economic Community (EC), and World Bank (WB). The problem is to use these funds efficiently.
- d. **Maintainability.** The system proposed, at least initially, is not difficult to maintain with the local staff in terms of operation and equipment maintenance; for future development, there are plans to train the needed staff.
- e. **Reliability.** The proposed parcel-based system has its own high level of reliability, and we think that the gradual creation of the system increases this reliability.

1.6. TEST, EVALUATION, AND PREDICTION

The registration system is going to be established initially in three pilot districts, where we hope the problems and bottlenecks of the system will emerge and the possibilities for further improvement become evident.

1.7. OPTIMIZING

For system optimization, we propose the philosophy of developing the “best” system that current knowledge and available resources permit. In the future, one of the directions to be developed is networking the system and having the central office check and control the whole system. On the other hand, perhaps only the central office will have a data input section; this decision will be made later.

The final and general goal is to have a proper GIS to gather, process, and provide a wide variety of geographically referenced information that may be relevant for research, management decisions, or administrative processes. The purpose of geographically referenced information is to make more information available at a lower cost. Such a GIS/land information system (LIS) would provide information concerning land tenure, ownership, valuations, land use, inventories of natural resources including soil, flora, fauna, forestry, geology, and water resources, and many forms of statistical tabulation such as the distribution of the population and the economic wealth of a region. All of this would be depicted on maps in order to serve planners, lawyers, developers, investors, government officials, bankers, judges, appraisers, and real estate agents who want to reduce the uncertainty of their decisions and to optimize the knowledge of the impact of their decisions.

As is well known, the four major parts of a GIS are: (1) hardware (computer, monitor, plotter, disk drives); (2) software; (3) database; and (4) personnel to operate the system. Parts (1) and (2) are easily obtained, but we sorely lack parts (3) and (4); so during the initial phase we will gather information for the creation of a database and train the people to use the system.

The possible layers of a future GIS in Albania would be: base map (streets, houses, and so forth), property lines, addresses, flood plains, utility lines, and land use/zoning.

1.8. DECISION

The decision has been made to create a conceptually modern registration system through gradual computerization, until we have the basis for a modern GIS. We feel that the GIS should be implemented only when we have clear needs for it and when cost analysis has shown it to be feasible.

1.9. IMPLEMENTATION AND PRESENTATION

Some of the proposed steps to be followed in the future would be:

- ♦ set up training courses in operating the registration system, in legal and social aspects, and in computer use;
- ♦ purchase the equipment needed for operating registration offices in the pilot districts: personal desktop computers running on DOS, 4-8Mb RAM, >200MB HD, and tape driver;
- ♦ start system operations with personal computers, with no communication between the districts and with communication between district and center by diskette or tape;
- ♦ work with the first version of Database IV software for the most frequently used procedures of the registration office and for the first registration, which, under current Albanian conditions, is low in cost;

- ♦ prepare instruction manuals for the software;
- ♦ create backup and archiving procedures and strategies for collecting data from all districts, starting with tapes, possibly switching to compact disk drives in the near future, and eventually utilizing optical disks;
- ♦ start digitizing information because of the advantages of its flexibility and multiplicity of use;
- ♦ design procedures for gathering the missing data for registration purposes, especially information in the Hipoteka Office to place on the proposed registry page;
- ♦ define important information for GIS using the a priori method for information collection rather than the ad hoc method;
- ♦ cooperate with legal and land policy people in the project to create procedures to assure that the computerized system fits with legal and social aspects and to avoid misuse or misinterpretation of the information; and
- ♦ create an extended parcel numbering system structured to keep and inform on the history of the parcel, for example, if it has been divided or joined over time.

2. SHORT PRESENTATION OF SOFTWARE ALREADY PREPARED

After long study and with the involvement of experienced persons, both Albanian and non-Albanian, we designed a registry page, which will contain all the registry information related to one parcel. So the first version of the software, we can say, deals with automatization of the registry page. Some of the data on the registry page are:

1. parcel description:
 - ♦ geographical location,
 - ♦ address,
 - ♦ neighborhood (north, south, east, west),
 - ♦ approximate size,
 - ♦ further measurements of the area,
 - ♦ the area of the building (if any), and
 - ♦ parcel identifier;
2. ownership:
 - ♦ kind of ownership, and
 - ♦ name(s) of owner(s);
3. easements, leaseholds, and other secondary interests:
 - ♦ kind of interest,
 - ♦ bargaining date and the period the obligation is in effect;
4. obligations:
 - ♦ kind of obligation,
 - ♦ bargaining date and the period the obligation is in effect; and
5. references (to find previous or later information related to the parcel).

The software designed to be user-friendly so that end-users can work with it easily. During the input of the data, checks are done frequently to avoid errors. After entering the data, there is a procedure to control the quality of the data.

The software is written in Database IV programming language and is menu driven way, which offers a lot of flexibility. The most frequently asked queries are offered on the menus; these menus can be easily modified as needed.

As mentioned above, one of the important points of the system is to have a unique parcel identifier, and, related to that, a parcel index will be built for fast processing. The parcel identifier number will be:

- ♦ geographical geodetic location, which links the parcel to the map sheet containing the relevant parcel;
- ♦ district code;
- ♦ zone code;
- ♦ number (in the ex-cooperatives, each big parcel had a identifying number, for example, 123); and
- ♦ fraction: after the land distribution, when parcel 123 was divided into five pieces, the pieces were given the numbers 123/1, 123/2,...123/5. For the parcel identifier number, the numbers will be 1231, 1232,...1235. In further parcel transactions (divisions or aggregations), the new parcel will have the original parcel number in the numerator and an increasing consecutive number, starting from 0, for each transaction in the denominator, for easy drawing on maps. To maintain the history of the parcel, an extended parcel identifier (see below) will be given.

It is frequently necessary to determine the specific interests in land (such as easements, mortgages) owned by a particular person or organization. Information as to ownership of interests in land can be obtained most quickly from a single, strictly alphabetical name index maintained and kept current by digital information technology.

One of the options offered to the registration system is to archive the information on magnetic supports, disk, diskette, tapes, or WORM (Write Once, Read Many) disks.

The proposed software is protected and secured such that only authorized users can run it and many of the possible errors are automatically detected and avoided.

One of the strategies used in creating the software has been to use coding as much as possible in order to save physical disk space and to build procedures for presenting the coded data in an easy and understandable way.

The system that will be used in each district office will be uniform in order to have uniform data presentation across districts.

3. EXTENDED PARCEL IDENTIFIER

Parcel identifier is the key for linking the textual data with the mapping data. There were many proposals about choosing an identifier that is the most useful. A mixture of a geographically related presentation with a locally based numbering system should be acceptable. The extended identifier we are proposing includes information about the history of a particular parcel; procedures are still needed for generating such a history.

4. CONCLUSIONS

- a) There is an urgent need to create the registration system in Albania as the basis of a future GIS.
- b) Drastic changes in real life do not necessarily need drastic changes in technology and the latest technology. Timing is too important. The idea of using the “best” system with the available knowledge and resources should be followed.
- c) It is important that all agencies understand the importance of the system and that they make their knowledge and existing information available to the registration system.
- d) The constraints on creating the system should be kept in mind: no experience, no modern equipment, no staff, no electricity, no digital information, poor data quality, and poor office facilities.
- e) The geodetic network in Albania should be continuously improved.
- f) The system’s most important components are people and data.
- g) A mixture of operating manual- and technical-based systems should be used.
- h) The system’s cost should be continuously analyzed and its impacts should be monitored.
- i) GIS should be established only after having clear needs for it.
- j) As for computerization, the objectives should be user-friendly software, unique parcel identifiers, good response time, clear archiving procedures, plans for future networking, use good and frequent coding, and uniform data in the system.

**Starting at 0-level does not have only bad consequences;
we will use the good ones.**