COMPUTERIZED SYSTEM SUPPORTING DEVELOPMENT OF LAND MARKET IN GEORGIA

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ABSTRACT

With the purpose of land market development in Georgia it was necessary to conduct land cadastre and titling activities, which is currently accomplished through support of different international donor organizations. Based on the above assistance it became possible to create computerized system in Georgian language providing complete automation of the aforementioned activities. Starting from processing aerial photography materials and ending with conducting transactions by the registration offices, entire work is accomplished through computer. Contemporary geo informative and data base management systems were utilized. In the process of creating computerized system on the occasion of transferring land and other real estate registration system into self-funding major criteria was quality of processing information and system economy, which in our opinion was optmal solution.

INTRODUCTION

After completion of land privatization in Georgia with the aim of ensuring sustainable land market and effective land tenure it immediately became necessary to conduct registration of land parcels, both private and those still existing in the ownership of the state as well as other real estate. The Georgian State Department of Land Management accomplishes this task with the assistance of various international donor organizations using for this purpose special programs. These donor organizations include “Agriculture Development Project”, funded with a credit from Georgian Government, World Bank (WB) and International Fund of Agricultural Development (IFAD).

1. BRIEF CHARACTERIZATION OF ACTIVITIES

Land Registration Unit (LRU) of the above mentioned project has been undertaking a pilot project since 1998. The first goal of the project was to create a model of contemporary computerized registration system facilitating development of land market in Georgia. For accomplishing this aim Land Registration Unit is conducting land cadastre activities on the territories adjacent to Tbilisi - Mtsekha and Gardabani rayons (cadastre zones). With the purpose of conducting land and other real estate registration computerized registration offices have been established in these two cadastre zones, supplying them with necessary technical equipment and recruiting with trained, educated staff.

Initially, in the preliminary stage of the project, major focus was made on establishing paper registration systems (paper maps and title records). However, since the project has commenced, all possibilities existing in Georgia have been studied and as a result it was...
considered expedient to establish computerized registration system planning and further activities are subject to this decision. Namely, it was decided to receive the fundaments of cadastre works: base maps, cadastre and registration maps and information on the identified titles not only on the paper but also through computer, in the form of digital files.

Later technical specifications and technologies were worked out and refined, structures of base maps prepared, defining registration processes and procedures. As a result a computerized registration system was established, which still experiences modification subject to the constant supervision and monitoring of registration procedures. Conditions of tender, detail explanations of requirements, periodic instructive service of the companies, organized consultations, extension of the territories to be surveyed (lots), quality (digital base maps and database) of the materials to be delivered to the executor and established mechanism of constant control resulted in receiving finally high quality production 3-4 times cheaper than planned.

Outputs of the completed, current and future activities and technology is as follows (Figure 1):

- Based on aerial photography, digital base maps were prepared in DXF format. Work is completed;
- Companies’ won in the tender conduct cadastre (surveying and title identification) works according to separate villages (cadastre sectors) and submit us final production (whole information of systemic registration), digital cadastre maps and databases. About 80% of the works are completed;
- Subject to the received cadastre information as well as applications from interested persons, district registration offices conduct initial and secondary (transactions) registration using computer systems;
- LRU assists several more registration offices. Buildings were repaired, staff was selected and duly trained, currently necessary technical equipment is being purchased;
- For the moment a new operational plan is in the process of preparation and agreement. According to this plan LRU will undertake supporting activities for regional registration offices for the whole territory of Georgia, which envisages office refurbishment, equipping, computerization, staff preparation and monitoring of the activities of the offices;
- LRU works to improve and refine existing computerized registration systems and registration procedures.

2. DESCRIPTION OF THE COMPUTERIZED SYSTEMS

Computerized systems were worked out so that their utilization gave the possibility of conducting systemic registration by the contractors, as well as carrying out sporadic registration and running the register with outlined transactions at the registration offices. Hence, informative coincidence was achieved. While creating computerized system of registration the major requirement on this occasion was ensuring economy, easiness of exploitation and information safety. Proceeding from the above standard program products, such as Microsoft Office and MapInfo were used as the base for the mentioned computerized systems.

With MapInfo program cadastre digital maps are prepared in 1:2000 and 1: 5000 scales, which depict up to 20 different layers. These are: land parcels with their registration numbers, buildings, roads, hydro, electric lines of high and low power, water pipes, woods, bushes etc.
Furthermore, through MS Access program we can prepare lists of land parcels and other real estates together with the forms to be printed out. After checking and modifying this information is delivered to the registration offices. Spatial information on cadastre maps and Databases are linked with each other with unique 9-digit registration number of land parcels, which includes registration zone code, sector code, numbers of quarter and land parcel.

Diagrams of land parcels and other real estate comprise following information according to the registration card divisions:

a) Division of property:
- Registration number of property, registration number of application, registration date of application, name of the zone (administrative district) and code, name of sector (unification of several villages or one village) and code, quarterly number, fixed or non fixed area of land parcels in hectares, area occupied by the buildings in sq. meters, legal area (considers area legally permitted at the time of reform for each family according to the categories), property address, title (private or state), function (agricultural or non agricultural), type of property, number of share in percentages.

b) Division of owner:
- Physical or legal person, owner’s address, co-owners and their addresses, title identification document. In case of title transfer number of record, application registration number and date should be added.

c) Division of liability:
- Includes information on lease, servitude, right to build, userfruit, or other limitations. These are number of record, application registration number and date, user (physical or legal person), title identification document, description of liability.

d) Division of hypothec:
- Comprises information on hypothec (amount, duration, title identification document), mortgage and lease (leasing object, user, document).

Land and other real estate registration procedure is accomplished as follows: According to the application submitted by the client the receptionist of the registry completes a computerized journal, the form of which is outlined on Figure 2. Later paper documents are delivered to the registrar and, in case of necessity, to the lawyer, who is completing initial or secondary registration forms with the purpose of conducting registration. (Please see initial registration form on Figure 3).

Registration Offices carry out scanning and archiving of the submitted documents.

According to the registration number of land parcels, owner’s name or any other data, the process of finding necessary land parcel both on cadastre map and database in the computer is accomplished quickly and easily. Through filter operation registration specialist can duly receive various necessary information. Printing out different types of documents – registration cards, abstracts and owner’s certificates is also successful and rapid process. Office employees have possibility to see easily and quickly history of a land parcel or any other real estate, compare the data with the submitted application and only afterwards make decision on conducting registration. Databases give opportunity for accomplishing statistical analysis.

For instance, sorting out land parcels’ database according to the owners’ names gives the possibility to define the number and location of land parcels for each owner together with
their total area. Through entering legal area in the land plots’ base one can define difference between land plot total area and legal area for each owner figuring exceeding including 15%, which is admitted subject to the decree issued by the president of Georgia. If exceeding is within the permitted frames, i.e. not over 15% than each plot may be registered and registration card -printed out. It’s noteworthy, that all documents to be printed out are automatically completed in the Database immediately on entering the information, except cover page of the certificate, whose cadastral plan is printed out from MapInfo. Besides land plots, apartment buildings are registered by indicating data of share.

Computer system is prepared according to the land registration processes and procedures based on the legislation normative acts of land registration.

Currently, subject to the obtained results and important financial savings LRU intends to establish 10 regional self-funding registration offices on the whole territory of Georgia and ensure their connection with Tbilisi republic center through an Intranet.

While creating the network various systems will be used for different regions: telephone lines, optic and satellite connections. In this case also major criteria will be system economy, rapidness of the submitted information and safety of this connection.

Proceeding from the aforementioned establishment in Georgia in the short run of computerized systems for facilitating land market development the operation of computer networks will become strong base for making effective decisions.

CONCLUSIONS

Currently, above computerized system of land and related real estate registration works successfully at two registration zones – Mtskheta and Gardabani regions. The system satisfies three basic requirements: It is cheap, fulfills all registration procedures and is easily used by users. In spite of this, there is an attempting for the completeness of the system. For the nearest future a version will be approved using ORACLE for databases and MAOBJECTS of ESRI for processing the graphical data.
FIGURE 1. Technology of land/real estate registration activity
FIGURE 2. Form of applications register

FIGURE 3. Form of systematic registration

REFERENCES

