

Developing a Concept of Integrated Information System for Real Property Registration and Cadastre for Uzbekistan

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Abstract

After coming into force of a new Civil Code in 1997, Uzbekistan began creation of the National Real Property Cadastral and Registration System, which functions at present in most regions and still mainly uses traditional records in the paper registers (books). The Government's legislative acts and decisions adopted during the last years and legalizing the informatization process in the country have determined a consistent change from the traditional "paper-based" property registration system to the modern Integrated Cadastral and Property Registration System. Certainly, implementation of the computer technology also implies systematic efforts in structuring the legal, institutional and personnel issues.

1. Introduction

Real property register and cadastre reform in Uzbekistan dates back to 1997 and the new Civil Code that prompted the creation of National Real Property Cadastral and Rights Registration System. This was initially to serve taxation, but the Law on State Cadastre of 2000 shifted the focus to the registration of real property rights for the benefit of the developing real property market. There is no one today who doubts that the information and communication technologies are to replace «paper-and-pencil» technologies practically in all kinds of human activity. However, this will not be a replacement «at once», and not only a «technological» change, but will require, first of all, the cardinal changes in people's minds and organizations' cultures who over centuries capitalized on the fact that «a piece of paper should be a prime consideration». It is a kind of postulated in various analysis that such replacement must be founded on a strong legal, institutional and technological basis. And the land administration and property registration domain are the most striking example of such areas of the human activities where such changes are demanded. This demand has been addressed over the world in various ways but we would like to share the experience of the process undergoing in one of the former Soviet Union Central Asia republic and now an independent state, Uzbekistan. The Government of Uzbekistan is seeking to upgrade its real property registration and cadastre system. It aims to develop an integrated (i.e., textual and spatial data), electronic real

property registration and cadastre system for deployment throughout the entire country under an improved legal and operational framework and capacities. This relates to larger objectives of Government's Master Plan for e-government and to improve investment climate in Uzbekistan. The real property register and cadastre is recognized as one among the 6 key e-registers of the country. Presidential resolution (No.PP-1989, 27 June 2013) established the Integrated Information System for Real Property Registration and Cadastre (hereafter - Integrated System) and National Geographical Information System (NGIS) as two of the six basic components of the e-government platform in Uzbekistan and vested them to Goscomzemgeodescadastre to establish and manage (Figure 1). In a parallel legal initiative, a new law on "State registration of rights to immovable property" to reflect the transfer to fully computerized real property registration and services has been drafted and is being considered by the Cabinet of Ministers. A transfer to electronic registration will require amending for the legislation to give a legal status to the electronic registration, as well as to produce a series of institutional changes, in particular, to implement everywhere a system for providing the cadastral and registration services according to the "one stop shop" principle. In this connection a concept of Integrated System consists on following main components: i) institutional; ii) legislative; iii) technological (transfer to computerization).

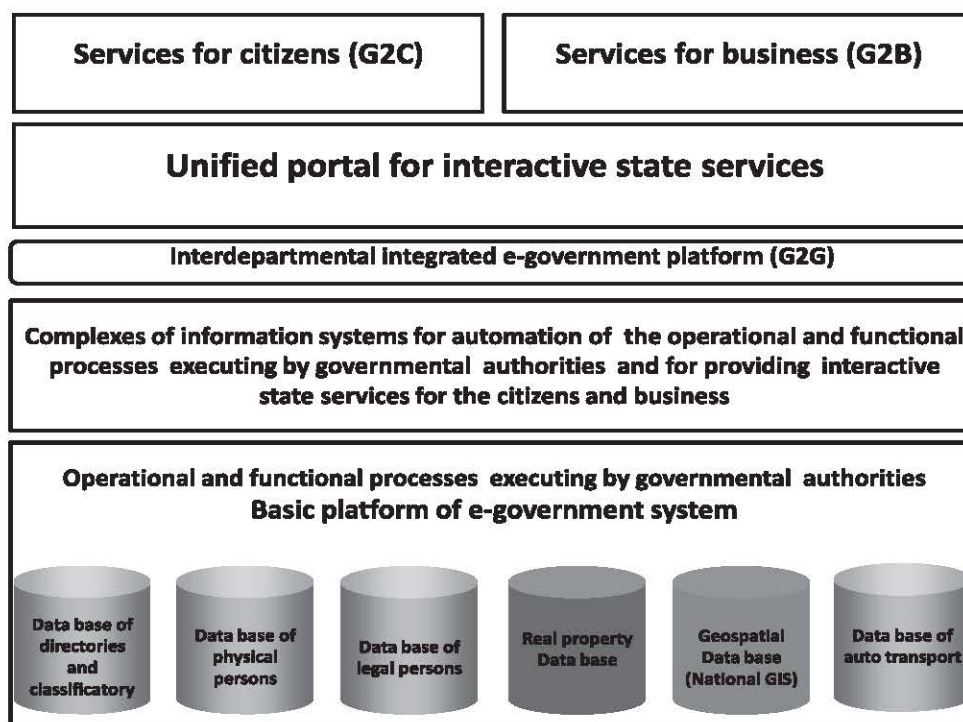


Figure 1: General e-government structure

2. Institutional Concept Component

One of the most significant problems in the sphere of real property cadastre and registration (Samborsky, 1999) till recently (rather, till 2005) was a separating the functions between the three different authorities: State Land Committee (land parcels in rural area), Uzgeodescadastre - the special government Agency for geodesy, cartography and cadastre (lands in cities and settlements, non-residential buildings and structures) and Cadastral Bureaus of Technical Inventory - CBTI (residential buildings and apartments). Departmental isolation and, therefore, separate registration often resulted in the work duplication, loss of time and money, and did not allow to create a unified state registry of real property rights, as well as the general information cadastre system. This made difficulties for the users, forcing them to retrieve information from different places, and for the property owners which had to apply to the various services. The worldwide advanced experience shows that functions on the property rights registration and the cadastre managing should be centralized in only one agency that could maintain both the computer database and the mapping cadastre base up to date. Therefore, in October 2004 the Government of Uzbekistan has decided to merge all above mentioned agencies to the single structure - the State Committee on Land Resources, Geodesy, Cartography and State Cadastre (Goscomzemgeodescadastre) and assign it

the functions on cadastre managing and real property rights registration. To provide an institutional basis for implementation of the Integrated System it is suggested to create a single organization at the central level (maintenance a central data base), and at the local level – to concentrate cadastre and registration functions in the special local offices based on the «one stop shop» principle. This principle is now widely applied in Uzbekistan for various fields, particularly for the organization of small and medium businesses, the house- and other building, the legal entities registration, etc. In our case, the «one stop shop» principle has already been applied in some regions for the cadastre managing and real property rights registration. Note that the cadastre and registration offices functions have the production and administrative character respectively, and are distributed between these offices in accordance with the antimonopoly legislation.

3. Legislative Concept Component

The legislative standards which regulate the state registration of real property rights are fragmented and uncoordinated. There are many regulations of different legal force, which contain the provisions on real property registration. In some cases these rules are in contradiction and do not correspond with each other.

For example, the Civil Code contains the contradictory provisions: one article requires registration of property right origin, its transfer, encumbrance and termination, while the others require registration of the documents that establish those rights (purchase and sale agreements, leases, etc.). Despite the fact that in the last few years a solid legal base on informatization has been created in the country, the normative documents, regulating an order and rules for the computer registration of real property rights are not available. The process of computer registration should replace the ink with the electronic records. This will be the legal, and not just the technical change. Electronic records will become the valid. Technically, the data will no longer be input manually (in the writing form) into the book, but will be extracted directly from the transaction document and entered into computer database. Output of data from the database will be presented as an electronic document, but not as a copy of record from the book. Participation of the registrar in the registration process will remain the same. As before, he/she authorizes the registration, placing a handwritten or electronic signature in the registry. In any case, the transaction can be made (and become the valid) just by entering data into the computer database, as provided for in Article 185 of the Civil Code. There are significant differences between the manual and electronic records. If the data validity is an essential feature of any reliable database, it is even more evident that the validity and accuracy for data contained in the real property registry are required. The registry data must be valid and unquestionable in the real property registration system. As the result of registration is a registered right, then the errors correction is and should be almost impossible. The fact that the electronic record can be considered as the valid is not something self-explanatory. Therefore it is necessary to give a definition of the electronic record and determine how it can become the valid, i.e. this should be a record which content will be valid and conclusive for all purposes (Alster et al., 2009). As defined currently in the second paragraph of Article 8 of the Law of the Republic of Uzbekistan "About informatization": *"The information stored and processed in the information resources, and confirmed by the electronic digital signature is an electronic document and takes the same legal effect as a paper document."* Our purpose is an electronic database, which contains the authoritative, reliable information. Thus, not only the output data, but also the database must be reliable. After entering the data into an electronic database, this data become as valid as the data contained in the handwritten database.

The document, which contains information extracted from the database, is a valid because the database information is valid. In the second part of Article 8 above, this issue is not addressed. According to this law, not the data in the computer database, but only the output of this data is valid - "an electronic document is equivalent to the printed copy". This data become valid only after its retrieving, and only if it is confirmed with a digital signature. As noted above, it is necessary that the data in the electronic database, and not only its output to be the valid. In addition, the second part of Article 8 does not make it clear whether the electronic database will replace the manual records, or information retrieved from the electronic databases has the same authoritative value as the manually written information. According to the law, it has the same validity, but not a priority. To create a computer system for real property rights registration, it is necessary to make the appropriate amendments to the Article 8, so that the data contained in an authoritative electronic database to be considered as the valid and can be presented in any legal proceedings as a proof of its content, and the document with the data retrieved from the authoritative database to be considered as an original, if certified by a handwritten or electronic signature of the authorized person, as defined in Article 7 of the Law of the Republic of Uzbekistan "About electronic digital signature". Such state of legislation does not completely provide an effective functioning of the Integrated System. A solution can be found in formulating and adoption of the special law on cadastre and registration of real property. The working out of such legislative proposal is also caused by the need to form a legal basis for advanced property relations on the property market, including the effective property management, the guaranteed rights for property owners and other rights owners, the regulation of an organizational structure, tasks and functions of public authorities providing the real property rights registration. This bill is not yet passed, however, it should be noted that the existing legislative standards do not directly initiate, but create the appropriate base for the start of change to computer registration. Therefore, the decision to begin the use of an electronic database for each registration district is just a technical and can be made by Goscomzemgeodescadastre, based on the technical ability for each registration office.

4. Technological Concept Component

The Integrated System Solution shall be implemented as integrated software with one common interface for the land registration, cadastral and other procedures.

The Integrated System Solution shall improve the security of the land transactions, efficiency and quality of land services provision to the customers, accuracy, consistency and transparency of land information through holistic management of title registration, cadastral and other land related data. It is envisaged that the Integrated System shall utilize automated cadastral registration processes in full compliance with the acting legislation and regulations, which include registration of land parcels and real estate objects and assignment of cadastral numbers as well as the registration of legal rights such as ownership, lease, servitudes, and others. There shall be configured all necessary components of the Integrated System to store, manage, retrieve and analyze the cadastral, legal and temporal information that is related to the registration of immovable properties and their associated rights and restrictions. A comprehensive customized GIS functionality will provide all needed cadastral procedures enabling maintenance of the cadastral data and its internal integration with related legal records concerning ownership or usage or any other legal relationship of juridical or physical persons. The Integrated System uses a distributed multi-layered application model for enterprise applications. Application logic is divided into components of application servers according to functions, and various application components can be installed on different servers depending on the layer in the multi-layered environment to which the application component belongs. The Integrated System is enterprise-wide 3-tier system:

- **1st tier** – Database Management System (DBMS), databases and file storage.
- **2nd tier** - Applications servers (AS) serve as middleware between clients and DBMS.
- **3rd tier** – various CRS clients and modules for both title registration and GIS operations.

End users use only 3rd tier applications for daily business routines and never have direct access to the DBMS and related file data storages. Based on the Integrated System envisioned architecture, the 1st and 2nd tier applications are deployed in a highly reliable environment of the Data Centers located in Tashkent and integrated via Local Area network (LAN), while 200 territorial offices access the central application servers from their remote locations using secured and high-bandwidth Internet connection. Integrated System maintains online data exchange with the National GIS Center and exposes

Integrated System portal services for public, professional communities and integration into other E-government G2G, G2C and G2B services. Deployment of the 1st and 2nd tiers of Integrated System on a modern Data Center and a distanced Reserve Data Center both operated in virtualized environment provides high-availability and centralized administration and ensures safety and disaster recovery. The Integrated System consists of software and hardware components that provide all needed functionality available to authorized users as depicted on the functional diagram. The system major architecture components and their functions are defined in the following sections (Figure 2).

5. Conclusion: Road Map for Transfer to Computer Technology

The Government's legislative acts and decisions adopted during the last years of independence and legalizing the informatization process in the country have determined a consistent change from the traditional "paper-based" real property rights registration system to the electronic registry, which should be implemented within the four following stages (Kwitowski and Samborsky, 2007):

- i) Analogue registration (on paper)
- ii) Double concurrent registration: analogue and digital
- iii) Computer registration
- iv) Advanced registration, based on the electronic method (in the on-line mode).

The transfer from paper to electronic registry is initially planned to implement in two stages. At the first stage, all new transactions will be entered into the electronic register. From a certain date, the existing paper books will no longer be available for registration. After an initial trial period when the new transactions are registered in both, the manual and in electronic form (and only the manual records are considered as the valid), all new transactions will be registered in electronic form only. During the second stage, existing old records will be converted to the electronic media. For new transactions, an electronic record will be unique and the only legally valid, therefore, no any manual records will be entered. As for currently existing records, a special temporary period will be set, during which the old manual records are considered as valid. And after finishing the conversion process of changes in each region, the electronic version will be the only legally valid and available.

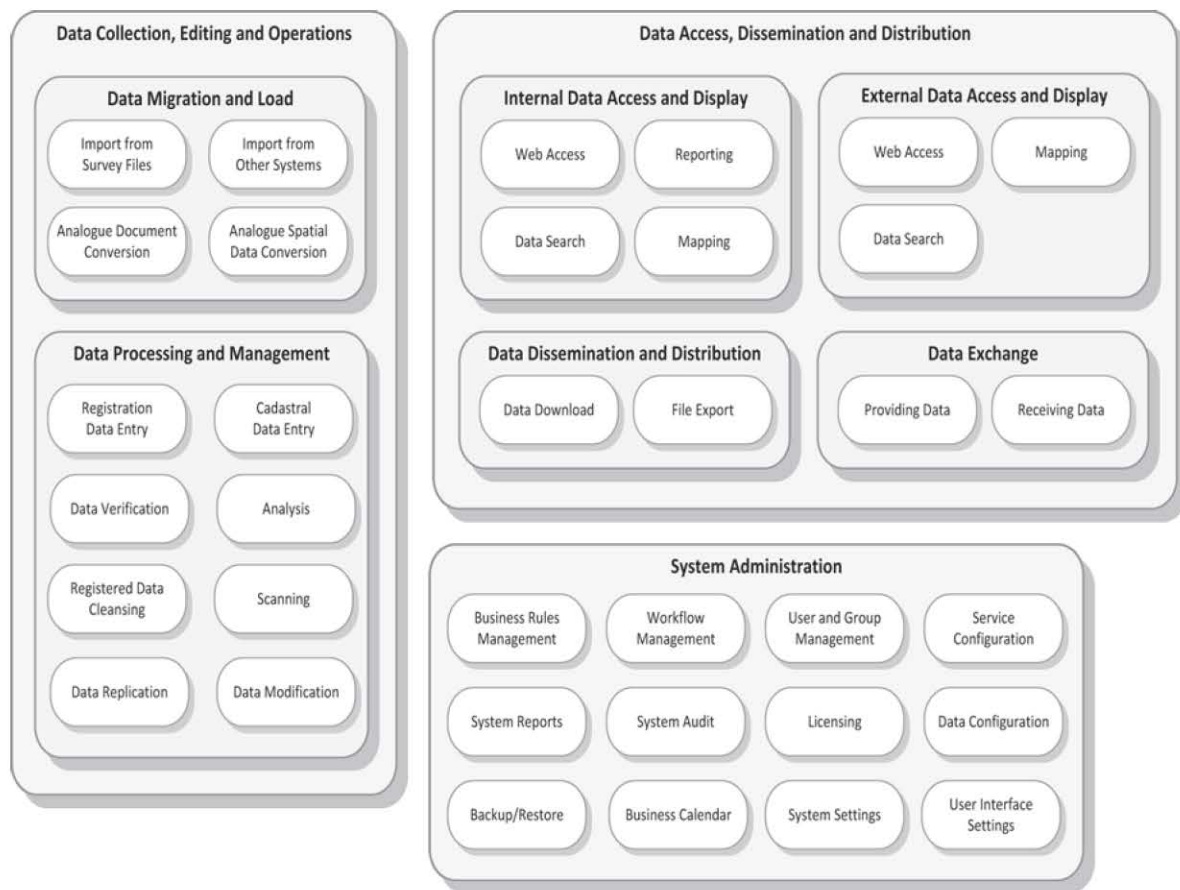


Figure 2: Integrated System's functional diagram

As mentioned above, the change to electronic registration will require amending for the legislation to give a legal status to the electronic registration, as well as to produce a series of institutional changes, in particular, to implement everywhere a system for providing the cadastral and registration services according to the "one stop shop" principle.

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