Location Profiling in Cadastre for Property Value Intelligence

Razzak DR. MOHAMMED ABDUR
Government of Bangladesh, 13 Green Corner, Green Road, 1205, Dhaka, Bangladesh
mdarajz@gmail.com

Key words: Location Profiling, Property Value Intelligence (PVI)/PVIS, Property Value Data (PVD), Property Value Cadastre.

SUMMARY

Property Value Intelligence is a systematic function of locational, physical, legal and economic factors. Popular with professional valuers, assessors, appraisers, surveyors, engineers, accountants, land administrators, registrars, realtors, developers, investors, policy makers, law makers, tax officials, legal practitioners, and favoured by the courts, the process involves the analysis of properties with scientific procedures in order to isolate and quantify individual influences on property value. It is argued that geographical influences on value are handled implicitly during this process.

This paper demonstrates that the spatial analysis of property data enhances the valuer's understanding of locational influences on property value. In order to examine the effect of location on retail property value in particular, legal and economic factors were held constant. Differences in value attributable to physical characteristics were reconciled using an 'intelligent' interface capable of undertaking simple comparison method analysis. Any remaining differences in value were attributed to locational factors.

The paper demonstrates that it was then possible to display comparable evidence on a map and shade each property according to its locational value. This aids the valuer in the selection of comparable evidence based on locational criteria. The value information enhance the right to fair value with land and non land properties over resources and productive assets help shape the degree of empowerment, autonomy and the scope of economic, social & political participation of people.

Property value Intelligence is scientific practice where property value information is a right and it includes process, analytics and valuation methods where property value information are the products of them to present in a useful manner as to make available for the user needs. Property Value Intelligence has different approaches to use property information and property value information and for presenting value listing by property classes in a timely manner.
1. INTRODUCTION

1.1 Beginning Stories

The situations as depicted in the following three stories represent the realities of land use mechanisms and management issues in relation to modern property value information and its impact on economy and society.

Scenario -- 1

Around twenty two years ago a study team sought my assistance to guide them for visiting the site of devastating river erosion of the Padma, one of the largest rivers of Bangladesh at the Tongibari sub-district only forty kilometers south to the capital city Dhaka. I hear the roaring sound and felt stormy river breeze. The sun was still not prepared to set down. There was no crowd near the river bank. An old woman was sitting there alone. When I approach to her I witnessed that she remained unmoved.

I saw her eyes were full of tears. I could not dare to ask her any question at that moment. After a while I tried to ask her some how on the tragedy caused to her by that time. She thought me as someone to help her and turned her eyes with a mood of hopes. She told the tragic events caused to her in the last couple of days and how she lost her only residential house and property and turned to a helpless beggar overnight. She pointed by her finger a long distance where her house was standing some times earlier. I followed her and there was nothing but big moving waves and strong river currents of unlimited water flows of cruel Padma and she fell in deep silence again.

Scenario -- 2

The name the of the island is Bhola, southeast district of Bangladesh, surrounded by the rivers Meghna, Elisha, Tetulia and the Bay of Bengal. I served there for several years. A larger part of Mirjakalu bazar, a rich business centre under Burhanuddin, sub-district was fallen into the large river Meghna in the month of April. Parties reported about the sudden fall of property values which became lower than the determined land values based on previous year.

And people became unable to comply with registration requirements and compelled to be reluctant to register there transfer deeds in time as there was no rule or provision to consider such situation. As a result they lost their legal rights and security over their purchased property, the money they spent and the government lost its revenue.

Scenario -- 3

“This is not a road or pukka street, it is an embankment” said the school girl wearing white and blue school dress in reply to my question when I asked her about the location and open green space in front full of water hyacinth in a deep pond. It was a river, people called her Arial Kha, a large business centre, a river port, police station, hospital, post office, registry
office, government rest house and municipality office building—all are there by the river bank. The river now turned its flow and some char land became visible.

The low land are still not fully usable. But some parties occupied the tiny portion adjacent to the road side and opened some temporary shops by hanging sheds on bamboo. This made the significant rise of the property value which has to be applicable for the entire area. In this situation parties have to suffer for several years. They are continuously complaining but no way to escape. Parties of major portion of the area are being deprived year after year from their legal rights of secure tenure and at the same time government is loosing revenue due to lacking of timely actions, policy making and implementation of justified property values appropriate to property classes, situation and location as well.

1.2 Background

According to statistics, in developed countries, the value of land and real estates together with mortgages on properties is about 60-65 % of the national asset. The land and property related activities, including property developments, generating about the 30-35 % of the GDP. The value of mortgages on properties in developed countries is 30-35 % of the GDP.

About fifty per cent of the occupation of expanding cities in developing countries is informal, people have no secure tenure (Bathurst Declaration) In these countries it is absolutely essential to improve the security of tenure providing appropriate tools for registration of informal or customary tenure.

The implementation of sustainable development (economy, society, and environment) is also one of the main topics worlds wide in developed and developing countries as well. There have been many changes related to land and properties during the last decade, resulted new challenges to be solved. These changes very much effected the developed, transition and developing countries (András Osskó).

During these years the concepts, principles and definitions of land, land utilization types, land qualities, land suitability classification and land evaluation procedures were already specified but in some circles the notion of a single, overall "land quality" in the sense of health-of-land has come to the fore.

The total capital we strive to sustain within and between generations consists of separate components:

- the natural capital (the land, the water, the air, genetic material, ecosystems, etc.);
- the human capital (knowledge, science, culture, health, nutrition);
- the institutional capital (schools, universities, research facilities, infrastructure);
- the social capital (democracy, good governance, civil rights, equity, social harmony).
1.3 Philosophy

Philosophers saw that nothing less than the establishment of liberty and the abolition of poverty among population by the confirmation of human laws to the natural order intended by the Creator. They saw that there is but one source on which men can draw for all their material needs and that is land and property as the Wealth Generation Cycle-central to the political economy with value for production, wealth generation, capital accumulation and making money for power (shown in diagram -1) and there is one means by which land can be made to yield to their desires by labor. All real wealth, they therefore saw, is the result or product of the application of labor to land and property.

In order to have value, an object must satisfy some human want, and it must exist in a quantity which is insufficient wholly to satisfy all desire for it. In explaining value, economists emphasize on the cost theories of value and the utility theories as classical theory, derived from Adam Smith, logically developed by Ricardo, and substantially completed by Senior, Carey, John Stuart Mill, and Cairnes.

According to this theory, market value is determined by demand and supply, being fixed at the point where the former just equals the latter. Value increases directly with increase in demand, inversely with increase in supply (other conditions remaining the same).

Diagram-1: The Wealth Generation Cycle

1.4 Property

The property as an institution, when limited to its essential elements, consists in the recognition, in each person, of a right to the exclusive disposal of what he or she have produced by their own exertions, or received, either by gift or by fair agreement, without
force or fraud, from those who produced it. The foundation of the whole is, the right of the producers to what they themselves have produced. Private property as an institution does not owe its origin to any of those considerations of utility, which plead for the maintenance of it when established in economic terms, such as "raw material of the earth" and "gift of nature" for land; "industry" for labor, and "valuable qualities" for productive powers.

1.5 Value of Property

Value from valoir, from Latin .valere, to be strong, able. In political economy, a word that is most commonly used to designate the power of a commodity to command other commodities in exchange. The term is applied, however, to several other conceptions. The potential capacity of an object to meet human needs is sometimes called value — ‘value in use,’ in the terminology of the classical economists.

In modern scientific economics, the term ‘utility’ has for the most use of the word value. Another meaning which the term value conveys is the significance of an object to an individual as the indispensable condition of a certain satisfaction.

Value in this sense of the term is frequently called ‘subjective value,’ to distinguish it from ‘objective’ or ‘exchange’ value. Subjective value is of two kinds, ‘subjective use value,’ where the importance of an object is gauged by the direct satisfaction to be obtained through its consumption, and ‘subjective exchange value,’ where the importance of an object is gauged by the satisfaction it will yield indirectly, through exchange.

Value at a given time represents the monetary worth of property, goods, or services to buyers and sellers. To avoid confusion, appraisers do not use the word value alone; instead they refer to “market value”, “use value”, “investment value”, “assessed value”, or other specific kinds of value. Market value is the focus of most real-property appraisal assignments and its estimation is the purpose of most appraisals.

A distinction is usually made between ‘market value’ and ‘normal’ or ‘natural value.’ Market value is the purchasing power of a commodity in the open market on a given day; normal or natural value is the value which would prevail if competitive forces worked without friction. Market values fluctuate widely from day to day; normal values change, if at all, only with changes in the fundamental conditions of production and consumption.

The word ‘price’ is often used as synonymous with ‘exchange value.’ Economists define price as the power of a commodity to command money in exchange; value (‘exchange’ or ‘objective’) is the power of a commodity to command in exchange commodities in general.

1.6 Real Property And Property Markets

Real property is defined by statute to include land, structures and improvements on land, certain mobile homes and machinery and equipment affixed to the land. The constitutional subclasses of real property and their assessed value percentages are as follows: industrial and commercial property, residential property, farm property, and public utility property. Some
public utility property is assessed at the lower industrial and commercial percentage pursuant to law.

A real-estate market is the interaction of individuals who exchange real-property rights for other assets, such as money. Specific real-estate markets are defined on the basis of property type, location, income-producing potential, typical investor characteristics, typical tenant characteristics, or other attributes recognized by those participating in the exchange of real property.

These real estate-related expenditures are directly linked to the price of goods and services in competitive markets. For example, the costs of roofing materials, masonry, architectural plans, and rented scaffolding are determined by the interaction of supply and demand in specific areas and are subject to the influence of social, economic, governmental, and environmental forces.

Totals of real property assessments include assessments of land, structures and improvements along with most mobile homes and machinery and equipment affixed to realty.

3. PROPERTY PROFILES

3.1 Defining

Property Profiles provides a wealth of information useful to understanding a subject property's makeup to research and find properties by address, owner name, legal description or parcel identification number.

Property Profiles returns all pertinent property and owner information for any property. Other reports available include Comparable Market Analysis (CMA), Nearby Neighbors, Subdivision Statistics, Nearby Schools and Businesses, Demographics Sketch Vectors, Aerial Images and Parcel Maps.

Wherever in the world businesses, investors and second home buyers look to acquire property, local jurisdictional laws, procedures and risks must be considered. Most active real estate markets have a system for organizing and recording property purchases; however, those systems vary widely.

Combine search criteria on location, general property characteristics, mortgage date and amount, sale date and amount, land information (value, acreage, square feet), legal information and miscellaneous characteristics as well as many other fields. All search results may be downloaded or printed directly to labels.

Residential and commercial real estate professionals can call up, layer picture-quality aerial images, and create tangible property information maps. Whether a company is building a manufacturing plant or a natural gas pipeline, developing an industrial park or resort community, or simply expanding its present facilities, protecting a real estate investment is
crucial to a company's financial security and shareholders' peace of mind. No matter what the political or legal climate, property owners around the world benefit from the financial indemnification that a title policy provides.

3.2 The Unique Feature of Properties

1. Market Position
2. Rental Demand
3. Upcoming Supply--Research to mitigate the risk of oversupply
4. Growth Drivers--Infrastructure and development expenditure
5. Affordability
6. Rental Income
7. Property Type
8. Quality Tenants--Profiles of quality tenants for the area
9. Tenant Expectations--Inclusions that attract desirable tenants
10. Property Management Fees--Local Property Management fee
11. Most Desirable Location within the Suburb--Locations to target or avoid
12. Screening Developers--Identifying quality local developers and builders
13. Product Quality
14. Product Suitability--Ability to supply product that matches the market demand
15. Property Valuation
16. Property Inclusions--property that meets demand expectations
17. Fixed Priced Contract--Contract terms that mitigate unexpected costs
18. Minimum Deposit
19. Settlement Terms--Settlement terms that minimise cash commitments
20. Capped Holding Costs--Contract terms that fix maximum holding costs
21. Passive Involvement
22. Community Evaluation
23. Site Inspection--Personal site inspection---
24. Property Design.
25. Client’s Expectations

Transportation is an important function of government which would facilitate the creation of a compact city, where people can easily find the facilities they desire for education, commerce, religion and recreation. Good land use, with the freedom of individuals to achieve the highest and best use of land, would ensure a desirable community. A compact city would reduce the need to invade the wilderness and devastate the environment.

Tangible personal property is defined as “goods, chattels, and other articles of value which are capable of manual or physical possession and certain machinery and equipment, separate and apart from any real property. For purposes of assessment, tangible personal property has the following three sub classifications and rates of assessment: industrial and commercial property, public utility property, and all other tangible personal property. Some public utility personal property is assessed at the lower industrial and commercial rate.
3.3 Indicators and Factors that Influence Land Value

The physical attributes of land include quality of location, fertility and climate; convenience to shopping, schools and parks; availability of water, sewers, utilities and public transportation; absence of bad smells, smoke and noise; and patterns of land use, frontage, depth, topography, streets and lot sizes.

The legal or governmental forces include the type and amount of taxation, zoning and building laws, planning and restrictions.

The social factors include population growth or decline, changes in family sizes, typical ages, attitudes toward law and order, prestige and education levels. The economic forces include value and income levels, growth and new construction, vacancy and availability of land. It is the influences of these forces, expressed independently and in relationship to one another, that help the people and the assessor measure value.

The FAO Council definition of sustainable development given in the introduction might be an acceptable starting point to identify issues and indicators. Based on this definition alone (and there are many others), indicators, each of which may integrate more than one variable, would be needed to track:

- the resource endowment, including its abundance, diversity and resilience;
- the environment, for example by reference to its pristine condition
- the technology in terms of capacity as well as environmental-friendliness;
- the institutions, e.g., fishing rights, enforcement system;
- the human benefits, e.g., food, employment, income;
- the economics of exploitation, e.g., costs, revenues, prices
- the social context, e.g., social cohesion, participation, compliance.

4. BENEFITS: GOVERNANCE, TAXATION AND JUSTICE

4.1 Governance And Its Impact on Property Value

Law required standard valuation methods for industrial and commercial property based on acquisition cost less straight line depreciation. In the absence of better evidence, fixed rates of allowable depreciation must be used depending on how the property is categorized.

4.2 Securing Fair Value And Justice By Using Location Profiles

While the major argument for raising public revenue from land rent and natural resources is because it is equitable and fair, it is also the most efficient method of raising the revenue which is needed for public facilities and services. Land is visible, can't be hidden and its valuation is less intrusive than valuations of income and sales. Taxes on labor and capital
cause people to consider alternative options, including working with less effort, which produces less real goods.

4.3 Adjustments For Use And Location

Adjustments for additional attributes and deficiencies could be made for each individual site, after the base market value had been estimated by the comparative method. The experience from a comparative city could be borrowed and tested in the local area to verify the results.

4.4 Land Use and its Locational Value: Valuation and Evaluation

"Land", the "functions of land", "land evaluation", "land qualities", "sustainability", "resilience", etc. need to be defined carefully to avoid confusion and to assure effective cooperation between international institutions and national planning entities that deal with the assessment of changes in land conditions.

The holistic concept of Land was already recognized in the Framework for Land Evaluation FAO 1995.

- land is the basis for many life support systems, through production of biomass that provides food, fodder, fibre, fuel, timber and other biotic materials for human use, either directly or through animal husbandry including aquaculture and inland and coastal fishery (the production function);
- a property is an attribute that already gives a degree of information on the value of the land type;
- a land quality (or limitation) is a complex attribute of land which acts in a manner distinct from the actions of other land qualities in its influence on the suitability of land for a specified kind of use.

4.5 Framework For Land Evaluation And Land Qualities

The many functions of Land:

- production function
- biotic environmental function
- climate-regulative function
- hydrologic function
- storage function
- waste and pollution control function
- living space function
- archive or heritage function
- connective space function

4.5 IAS/IFRS Standards for Property Value

Major IAS and IFRS standards and their application areas are as follow: a. IAS2 applies for Inventories, b. IAS11 applies for Construction Contracts, c. IAS16 applies for Property, Plant
and Equipment, d. IAS17 applies for Leases, e. IAS40 applies for Investment Property, f. IAS41 applies for Agriculture and g. IFRS6 applies for Exploration for and Evaluation of Mineral Resources.

4.6 Property Registration: Central To Property Value Applications

Registration systems fulfill a good variety of human needs such as legal validation of all types of agreed, documented, signed and executed contracts, documents and deeds of any transaction, statement, terms and conditions for making basis of evidence, delivery of information like certificates, licenses, searches, inspections, from the original documents, reports; preservation and protection of databases, administration and supervision of records and registries, archival security management, geographic and land information (GIS and LIS), like parcels (khatians), cartographic maps (manual or digital), ICT and public sector information (PSI), collection of public revenue e.g.-, stamp duty, registration fees, gain tax, VAT, local government taxes, court fees, fines etc (Razzak. Dr. M.A 2008).

The system also includes development issues like sustainable development, sustainable land management (SLM), regulatory reform, land value taxation (LVT), valuation techniques and approaches, assessment, accounts, and determination mechanisms with a set of technological, procedural and technical arrangements to provide appropriate services in practice.

The conceptual framework of land registration includes a set of complex terms, components, and situations such as laws, systems, institutions and activities; such as land revenue, land tenancy, land rights, land valuation, land transfer, land tax, land litigation and land reform etc. To explore such components, their interrelationships and impacts on public finance, a closure look into the definitive structure seems to be more important.

Land registration is the “process of determining, recording and disseminating information about the ownership, value and use of land when implementing land management policies” (UNECE Land Administration Guidelines) “Ownership” should be seen as a broad concept of land tenure within various jurisdictions (statutory, customary, informal, etc.), “land” includes constructions at subsurface level, ground level and above land level (e.g. buildings).

The formal registration system has evolved for more than three centuries into an approach that is being used to varying degrees in the modern civilized nations. While registration plays a crucial role in ensuring each country’s right to information, public sector information (PSI), property transfer, evidence, transparency and tax system throughout the world.

It considers the main segments and registration related issues in international comparisons such as public finance factors like valuation, land value taxation (LVT), income tax, inheritance and gift taxes, capital gains tax, value added tax, stamp duty, registration fees, property transfer tax, wealth tax, records and archives, digital information database like SDI, records of rights (ROR), LIS, GIS, PSI, standards and related issues.

Property Registration evolves the central and vital part of the entire system which ensures legal base of ownership with human and judicial support toward making a just, accountable
and transparent society. At the same time it contributes a significant revenue share to the 
public finance and overall economic, social and national development.

4.7 Land Registration And Information Systems

The evolution of cadastres, LAS, SDIs, and land markets shows that the traditional concept of 
cadastral parcels representing the built environmental landscape is being replaced by a 
complex arrangement of over-lapping tenures reflecting a wide range of rights, restrictions 
and responsibilities, and that a new range of complex commodities, building on this trend is 
emerging.

4.8 Land Registration In Spatially Enabling Government

For modern governments at all stages of development, one question is how best to integrate 
these processes, especially to offer them in an Internet enabled e-Government environment.In 
some jurisdictions, title registries may offer some protection to registered owners and/or 
mortgagees. In others, purchasers may have to rely on legal opinions based on excerpts from 
official title records. In all cases, for an investor or mortgagor to have true peace of mind 
about a property acquisition, a fundamental concern should be to secure "good title."

4.9 E-Government

Technically, digital land-information products offer considerably more possibilities for 
perfect reproduction and fast, inexpensive and easy distribution. Customers want to be served 
in a professional way, user-friendly tools, information that is timely, up-to-date, reliable, 
complete, accurate, relevant, if necessary customised, well-integrated with other relevant data 
sets of other suppliers, good value for money and systems that are compatible with the 
customer’s working procedures.
Spatial Information, 
Cadastre as The Fundamental Layer of Information 
Easy Mechanism of Spatial Enablement 
National Land Information Policy 
Interoperability of Spatial Information 
Interoperability of All Government Information 
E-Government Service Delivery 
Use of “Place” To Organise Information, Services And Activities. 
Electronic Conveyancing—

5. IMPLEMENTATION , APPLICATIONS AND INNOVATION

5.1 Developing Smart Property Value Cadastre

Interactive maps and databases, including Property Value Information Systems (PVIS) 
create successful and functional platforms of Property Value Intelligence in practice 
comprised of a set of property value data bases. These are as follow : i) Market Value
5.2 Integrating Profiled Location Data Using Geospatial Business Intelligence with PVI

A data warehouse is a subject oriented, non-volatile, integrated, time variant collection of data in support of management’s decisions. Common functions of business intelligence technologies are reporting, online analytical processing, analytics, data mining, process mining, complex event processing, business performance management, benchmarking, text mining and predictive analytics. What is geospatial data and geospatial analytics? When people refer to geospatial data, they are often describing address-related data (a specific address, point of interest, ZIP code, and so on). This data can be matched to a specific latitude and longitude using a process known as geocoding.

Geocodes for addresses and points of interest can also be integrated with other data sources to enhance analysis in dashboards, visualizations, and more advanced modeling. The Geo Database is a collection of geographic datasets, works in concert with ArcGIS software to provide a rich framework for modeling attributes, spatial and temporal relationships, and transactions. Best practices for data modeling and analysis by addressing spatial integrity, attribute integrity, work flow, and scaling. It clarifies geographic data modeling concepts of the geo-database information models.

Geospatial data, sometimes referred to as location data or simply spatial data, is emerging as an important source of information both in traditional and in big data analytics. Geospatial data and geographic information systems (GIS) software are being integrated with other analytics products to enable analytics that utilize location and geographic information. Such analytics are also moving past mapping to more sophisticated use cases such as advanced visualization and predictive analytics. Geospatial data sources include:a). Global positioning system (GPS) data and b). Remote sensing data.

5.3. Database Deployment Software and Applications

Organizations store feature data in a structured file format such as Autodesk spatial data file (SDF) or SHP. With SDF, organizations benefit from the power of a spatial database without the cost or management overhead. Then organizations can easily extend the reach of their information by using a web mapping application such as Autodesk Map Guide Enterprise to
deliver powerful, easy-to-use online maps and related information to audiences of all sizes.

“With Topobase and Oracle Spatial, we no longer have to maintain multiple data sets, and we have reduced the risk of data entry errors. Autodesk Geospatial makes it easy for engineers and designers to manage and share mapping data—such as regional scale data sets, cadastral information, and utility network data including pipelines, transformers, and valves. Additionally, teams can import and export data sets from many different CAD and GIS file formats—such as ESRI Shapefiles, MapInfo TAB files, MicroStation DGN, and raster data from multiple coordinate systems—and combine it with DWG files and have the information overlay properly.

Organizations share spatial data with other departments and applications, making spatial data a central part of its IT ecosystem. In this stage, GIS data and functionality get woven into other business systems, integrating with assessor databases, permitting systems, ERP systems, and more. The spatial application server supplies geospatial intelligence and data to these other applications. Autodesk, resellers, partners, and system integrators build powerful solutions to meet the organization’s specific business goals and processes.

Autodesk Topobase provides sophisticated solution modules that make it easy for organizations to establish and manage the database deployment. By moving up the geospatial value chain, organizations increasingly leverage their geospatial data for a variety of business functions. Organizations gain the ability to organize data effectively, implement real-world coordinate systems, and work with larger data sets. They deliver increased scalability and security, ability to complete long transactions, and integration with other systems.

Organizations need to move from a file-based environment using DWG, SHP, or SDF to a spatial database environment using the full functionality of a relational database management system (RDBMS). With an RDBMS, hundreds or even thousands of people can create, edit, and manage the same data. With a full RDBMS, organizations get more scalability, as well as added security and the ability to create more sophisticated data models.

Using Data Access Technology, Autodesk Geospatial products work natively with spatial data stored in Oracle, Microsoft SQL Server and MySQL, as well as with ESRI’s ArcSDE middleware. As a result, organizations are able to fully use the security, scalability, sophisticated data models, and multi-user read/write power of an RDBMS. AutoCAD Map 3D provides tools that make data and schema migration from SDF or SHP files to a full-scale RDBMS easy.

7. CONCLUSION

This has been devoted to materialize the vision toward achieving the location based property value information intelligence as an easy and accessible platform for prompt decision making at all levels of public, private, business and economic sectors. Incessant research efforts are also vital to enrich the system in practice. Our pragmatic optimism invites the practitioners’ communities to move forward as to find the solutions to put in practice with a shared, consorted and a well communicated network in the near future.
REFERENCES


Stoter, J. (2004), 3D Cadastres, PhD TU Delft, the Netherlands

United Nations/Federation of International Surveyors (1999 Bathurst Declaration on Land Administration for Sustainable Development) Bathurst

UN (1996), Land Administration Guidelines, New York, Geneva

UN (2001), Inventory of land administration systems in Europe and North America, London

UN Habitat (2004), Pro Poor Land Management, Nairobi


Biographical Note

Dr. Mohammed Abdur Razzak is an expert, author, Registrar of Lands and Real Estate, Member Secretary (key role) to the District Valuation Committee (DVC), a selected member to the Regulatory Reform Commission for its International Visiting Team and self-motivated researcher in the fields of property registration and information systems currently working around twenty years at the Registration Department under the Ministry of Law, Justice and Parliamentary Affairs of Bangladesh Government.

CONTACTS

Dr. Razzak, Mohammed Abdur
Institution: Registration Department, Government of Bangladesh
Address: House # 13 Green Corner, Green Road,
City: Dhaka
Country: BANGLADESH
Tel. +8801534619343
Email: mdarajz@gmail.com
Website: www.facebook.com/mdarajz

WCS-CE - The World Cadastre Summit, Congress & Exhibition
Istanbul, Turkey, 20 –25 April 2015.