Development of Cadastral Survey and Land Ownership Registration System in Mongolia

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Background

Mongolia covers a vast territory of over 1.56 million square kilometers and located (double landlocked) between China and Russia. This great wealth of land belongs to only 2.8 million people with 35 million livestock.

The reason for Mongolia's sparse population is that much of the land is inhospitable Gobi desert and large steppe or high and inaccessible mountain ranges. This hostile terrain combined with a harsh and severe cold climate has allowed only the hardiest of nomadic people to exist in such an environment.

Mongolia



HISTORY

For hundreds of generations in the past, the nomadic people of Mongolia have grazed their livestock more or less at will, depending on the seasons and availability of grassland, pasture and water. The land was like the air and sky for all to use with equal rights within certain territorial limits, which prior to 1924 were known as *HOSHUU* (*smallest administrative units*), meaning banners.

On November 14, 2005 the 60th General Assembly of the United Nations adopted a non-vote resolution recognizing the 800th Anniversary of Mongolian Statehood, to be celebrated in 2006. The resolution welcomed the efforts of Mongolia and other member countries to preserve nomadic culture and traditions in modern societies.

Old (Cadastral) Boundary Map of HOSHUU



TODAY

In recent years tremendous social changes have taken place. Nowadays more than 50 percent of the population has become urbanized (migrated from the rural areas to the city where is developing informal settlements). Cities and settlements have expanded. Reserves and national parks have been established. Areas of arable land have been set aside for farming.

This has resulted in a large reduction in the traditional pasture land. The numbers of livestock have continued to increase and have now almost reached the projected sustainable maximum of 35 million animals. These great herds of animals are now tending to congregate in areas around the settlements in the northern and central Aimags surrounding Ulaanbaatar (captial city of Mongolia) where living about 1 million people (1/3 total population of the country); an area of hills and plains some 1,500 meters above sea level containing much of the best available grazing and farming land in the country.

YURT (GER) DISTRICT OF THE ULAANBAATAR CITY



Informal Settlements - Mongolia





LAND PRIVATIZATION LAW

The Government of Mongolia considers it crucial to develop an enabling legal and institutional framework to implement its policy agenda for land related issues and the strategic importance of the development of a fully functional and transparent land market economy.

The new Land Law and Land Privatization Law in Mongolia became effective in January, 2003 and their purpose is to regulate ownership, possession, use and other rights to land by citizens, economic entities and organizations. The total area of State-owned land that the new Land Law makes available for privatizing is restricted to less than 3 million hectares (2 million of rural-farm lands and 1 million of urban- city lands) and consists of cultivated farm land and land within the city and settlement limits.

NEW TASKS

The Government of Mongolia recognizes that access to land is a constraint to infrastructure, agriculture and urban development in Mongolia. Investors seeking land for commercial, agriculture, tourism and industrial development are all constrained by the difficult process of securing land title (tenure) and the need for a more efficient cadastral survey and land registration system.

Cadastral Survey and Land Registration System Development

The Development of Cadastral Survey and Land Registration system in Mongolia is creating an institutional environment for the administration of land titles and land-lease certificates, for collection of land fee payments, property taxation and for urban and agricultural (rural) development. A systematic nationwide cadastral survey will provide the basis for the legal description for land title and land registration by Ulaanbaatar City and the 21 Provincial Governments. As the cadastral program proceeds and more cadastral data becomes available it is proposed that this information will be networked to the Central Government where a National Land Information System (NLIS) will be developed.

There are 3 components to the Cadastral program is as follows:

Component A: National Geodetic Reference System

A new National Geodetic Reference System, MONREF 97, globally aligned with the ITRF 2000 epoch 1997/8, has been established in Mongolia.

Component B: Cadastral Survey and Mapping

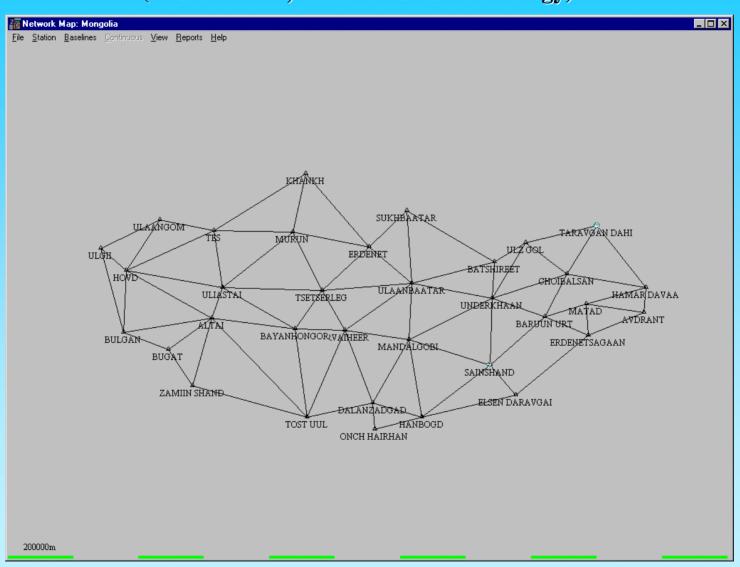
This component start implementing by the Administration of Land Affairs, Geodesy and Cartography (ALAGaC), the Ministry of Construction and Urban Development of Mongolia in close cooperation with Ulaanbaatar City and Provincial governments.

Component C: The National Land Information System (NLIS)

The NLIS will incorporate each City and Provincial cadastral database (LIS) as this data becomes available under Component B.

A new National Geodetic Reference System

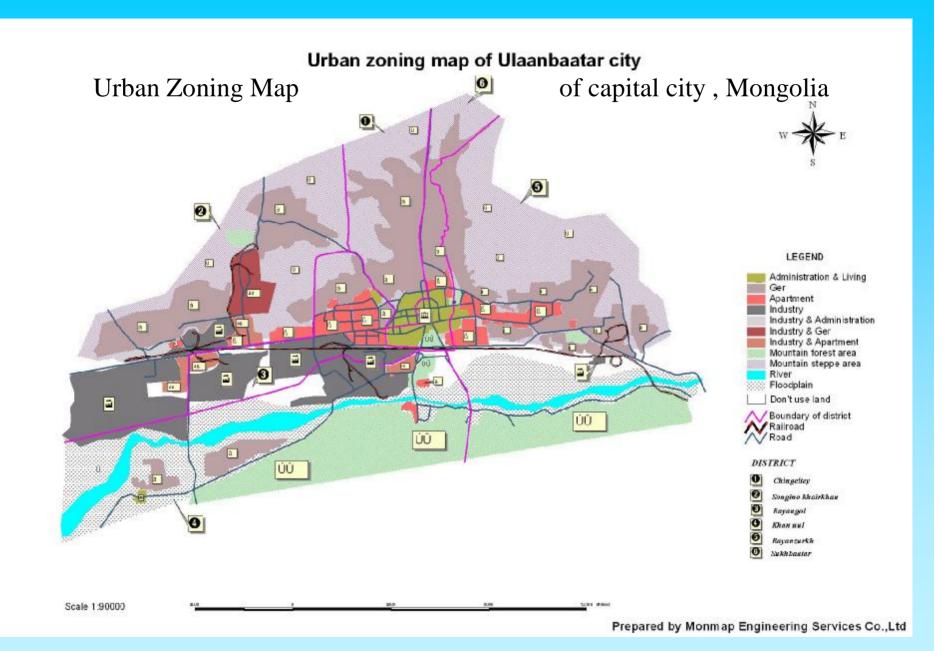
(MONREF 97, based on GPS Technology)



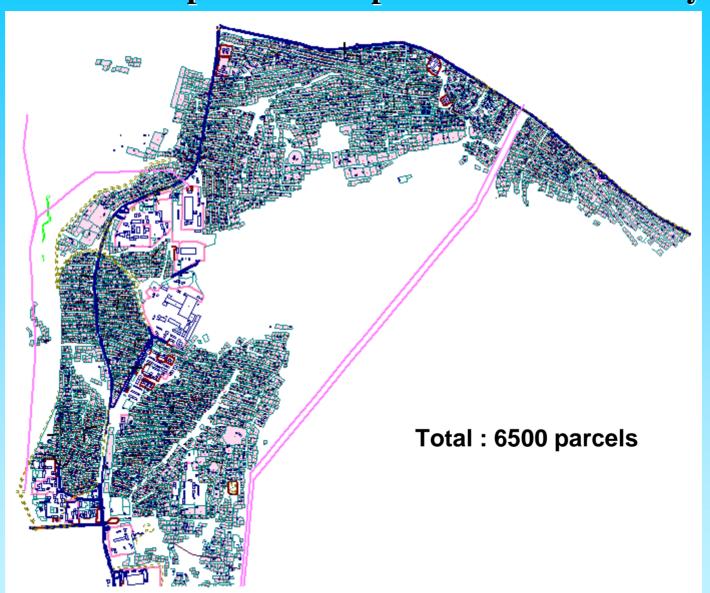
Cadastral survey and large scale mapping (1:1000)

Cadastral surveys and map data acquisition carried out by licensed commercial survey companies, contracted, supervised and financed by the Administration of Land Affairs, Geodesy and Cartography (ALAGaC) under Ministry of Construction and Urban Development of Mongolia in close collaboration with City and Provincial land management departments. The land management officers of these departments accompany the private land survey engineers during their fieldwork and are responsible for providing all the attribute data required for each land parcel, as well as public relations and the settling of disputes.

The duties and responsibilities of the ALAGaC(cadastral survey, land and real estate (buildings) property ownership registration), the Ulaanbaatar City and provincial land management departments is specified in a Memorandum of Agreement (MOA) between the Central Government (the Ministries of Justice and Finance, Central Tax Department etc.) and the local governments concerned.



The Parcel map of Western part of Ulaanbaatar city



GPS RTK Base Station



Parcel Boundary Survey Marker at the Site

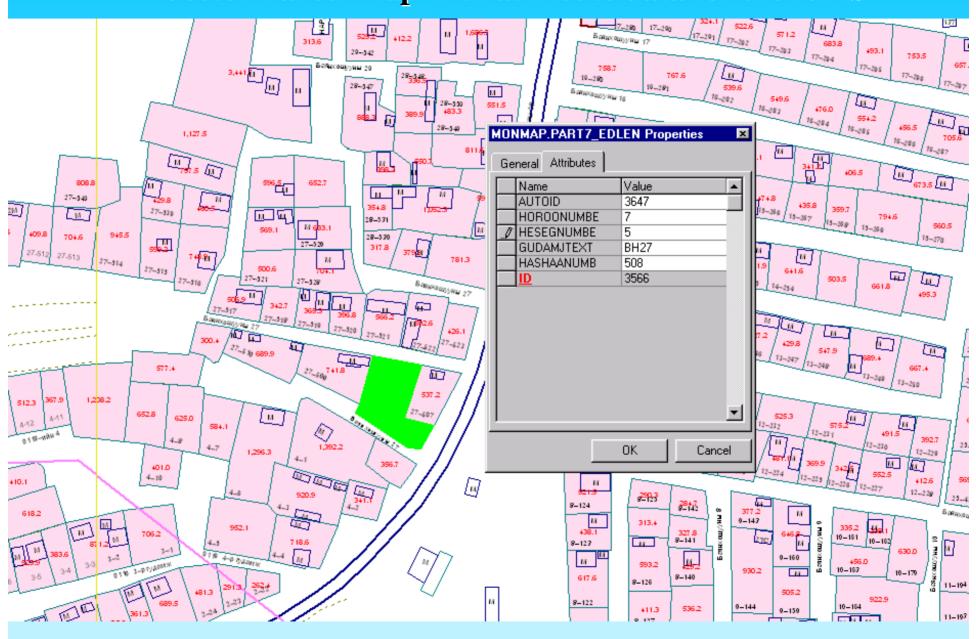


Vector Parcel Map with High Resolution Quick Bird Satellite Raster Image

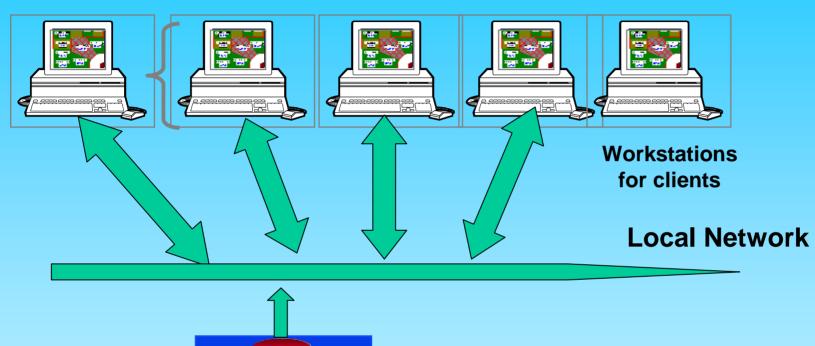


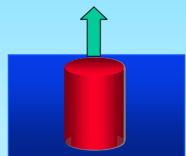
Parcel Map (Scale 1:1000) with National cadastral 22. 5 ann 137 M 683.8 14 493.1 3,441 [1] Баянкошууны 29 17-295 657.7 758.7 L<u>m</u>_, 16-286 539.6 М 28-550 483.3 $L_{\rm HI}$ 551.5 М 616.PM 1,127.5 16-286 811.6 [II] 751.5 [II] 719.9 24-402 $\lfloor m \rfloor$ 596<u>.5</u> LU 673.5 M & conscious/ М 15-365 9/4 28-531 465.0 M 409.8 945.5 28-530 25-427 15-270 27-520 27-513 781.3 431.7 25-426 295.8 27-521 Баянкашылғы 27 lu lu 12-239 338.5 25...423 107 714.4 416.2 512.3 12-239 [m] 652.8 575.2^{III} 10 491.5 692,2 12-218 019-WW4 400.6 389. 25₋₄₁₉ BARNOOMBYNN 12 12-220 III M E.] 401.0 900.9 4-10 410.1 412.6 14 82123 28#47 8=142 25-420 618.2 M 438.1 9-143 327.8 9-141 646.8 M 10-181 8-123 14 M J 630.0 018 4-0 5'ADMY 9 - 1601,393.1 10-167 930.2 1.6 8-126 M 1/1 757.4 9 - 144411.3

Vector Parcel Map with attribute data for the NLIS



Cadastral Open GIS Database Concept





Relational Data Base

Database Server

The National Land Information System (NLIS)

The NLIS will consist of a central land information system to be established at the ALAGaC. This will be networked to local land information systems (LIS), established under Component C, in the Ulaanbaatar City Lands Department and in the lands management departments offices in each of the 21 Provinces. Detailed NLIS network design, supply of software, hardware, and training will be supplied on a turnkey contract basis, under overall supervision from ALAGaC with advisory assistance provided by the Asian Development Bank under a Technical Assistance project.

National Land Information System Concept

