



Modeling Dubai - Aspects of Cadastral Management System in Dubai

Shaping the Urban Revolution in Dubai

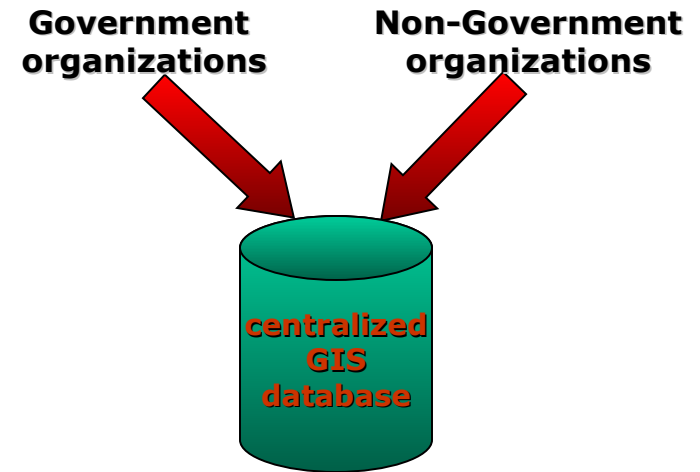
Presenter: Aisha S. , GIS Center , Dubai Municipality

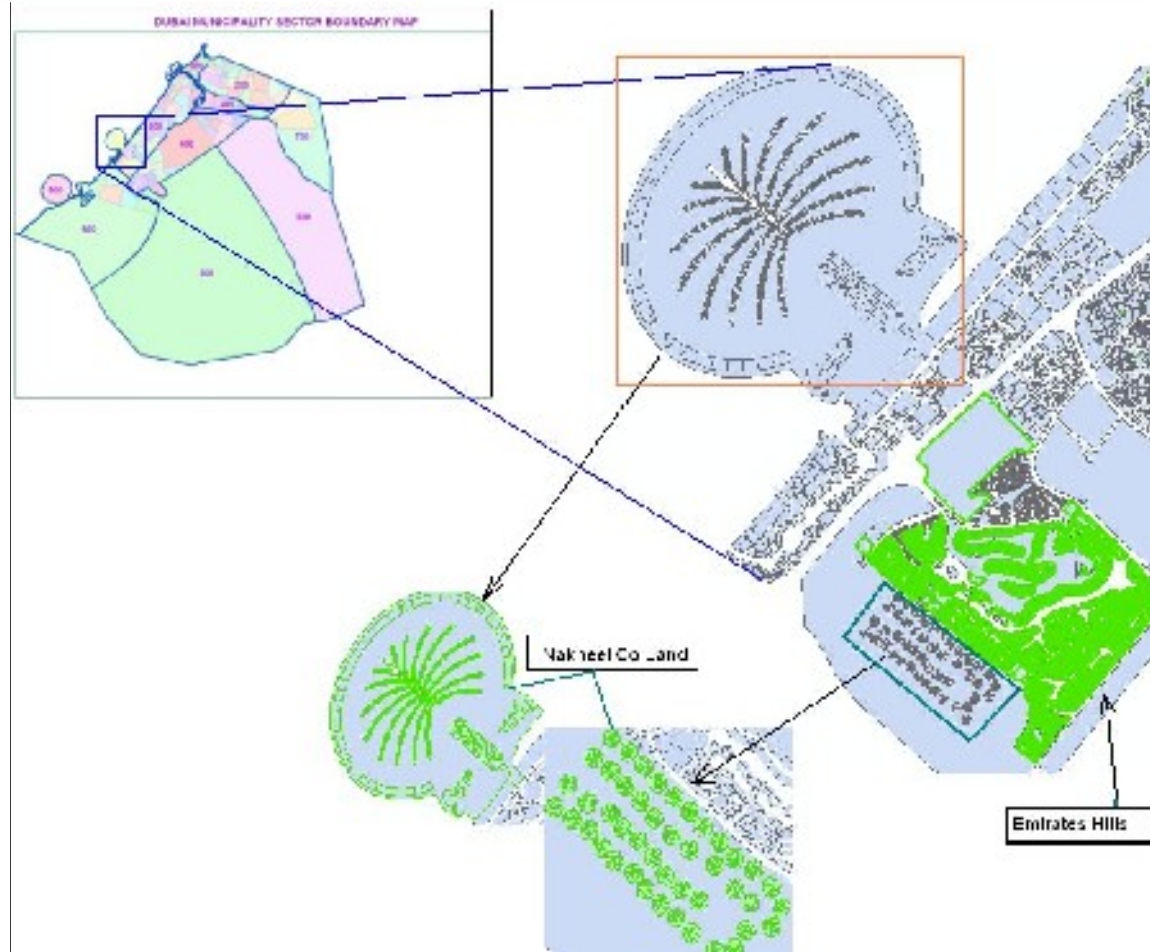
Email : ASKHALFAN@dm.gov.ae

The **main objective** of the cadastral management system is **to provide the common platform for all the Government and Non-Government organizations to utilize the centralized GIS database management system**

In order to :

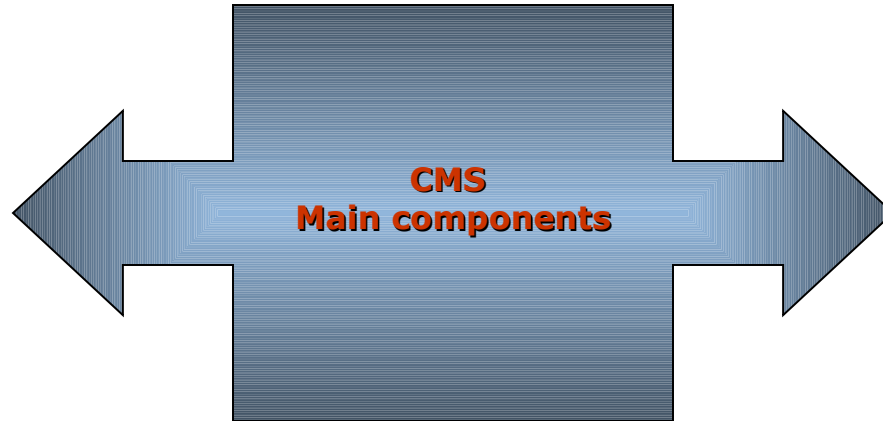
- Reduce the time taken for the land transactions between the organizations
To maximize information sharing for various planning & decision making
- To avoid the data redundancy and maximize the data efficiency.
- To integrate all the land transactions, land ownership and building permits
- To impose standards on land uses
- **To serve rapid & dynamic economic nature of Dubai (selling and buying)**





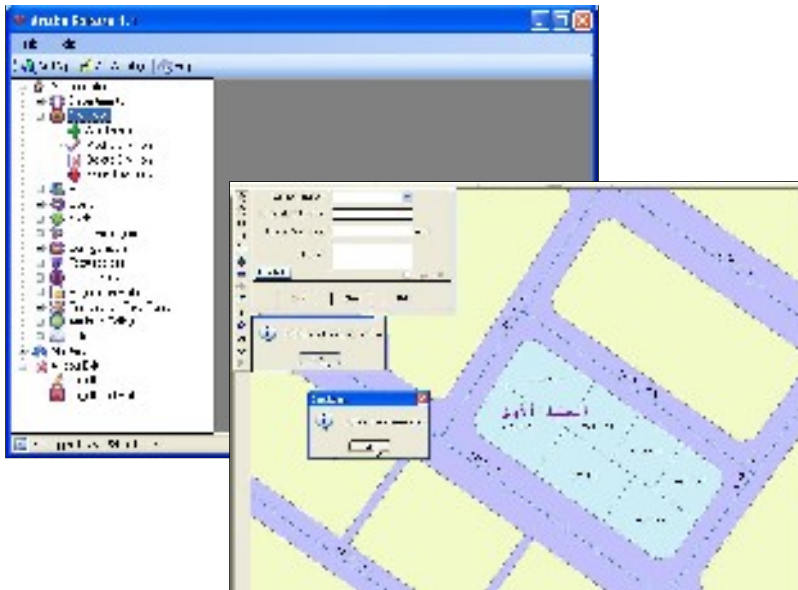
Jpeg-1. Showing the coverage of Dubai Land holders

**Cadastral Management
Application (Attabu)**



**Dubai Cadastral
Model**

Attabu is advanced system that would enable all concerned authorities of real-estate management and urban planning in Dubai to manage all land & property data through one interface on real-time basis. All later would be done via same Cadastral data repository.

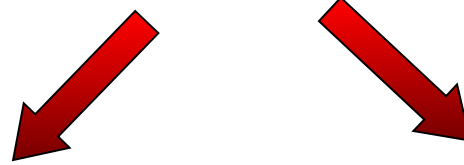


Attabu provides a variety of user-friendly services through Internet or Intra-net technologies keeping in mind that security is a key consideration.

For example: - While the Attabu Cadastral geospatial model is rich in content, users get access only to data that they are authorized to access.

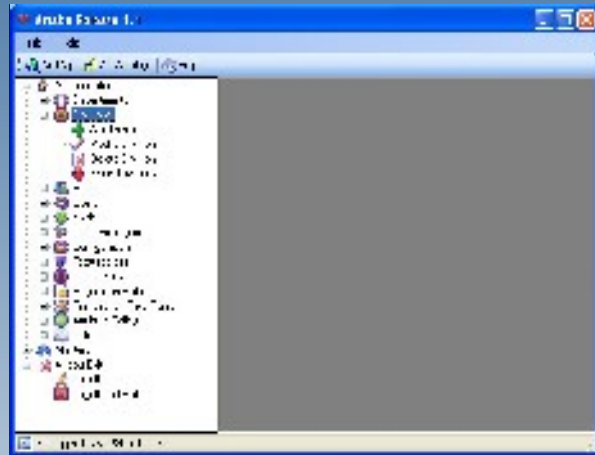
Another example: - uploading field survey data, information inquiry & analysis, plotting maps and affection plans in several sized (A0, A3,...etc) in Arabic & English.

Attabu



Admin Module

- Manage Users Privilege
- Manage Regulation Rules
- Manage Transaction Field Rules



User Module

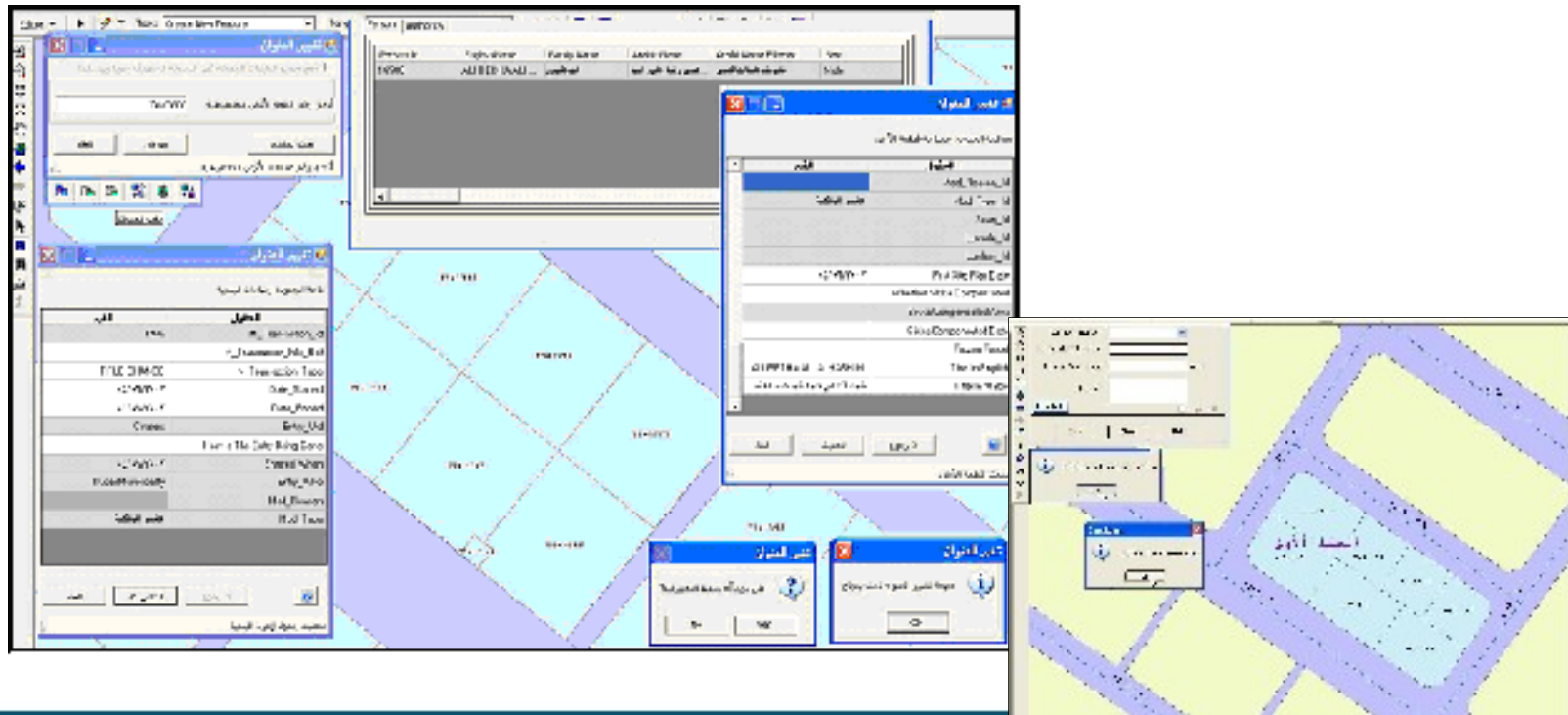
- Parcel Creation
- Parcel Split
- Parcel Merge
- Owner Change
- Compensation
- Cancellation
- Partial Parcel Affection
- Complete Parcel Affection
- Export Data/IMPORT DATA



Attabu

Language compatibility:

The interface developed for the purpose of preparing the Cadastral Maps & also incorporates in it the option to use the native Arabic language of UAE for which the Cadastral Maps are prepared



CMA (attabu) Model Diagram

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graph TD; A[CMA (attabu) Model Diagram] --> B[Static Components]; A --> C[Dynamic Aspects];
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Static Components

The Static components are act as a supporting data for the dynamic layers.

Static Layers: planning boundary, public facility, parcel boundary.
Static object Class: parcel_xref, municipality_transactions and owner nature

Dynamic Aspects

The dynamic components actually undergo geometrical changes during the transactions such as split, merge and affections.

Dynamic Layers: parcels, affected parcels, compensated parcels
Dynamic objects: ownerships, persons & authority

Instant site Plan:

Attabu Add-ons:

The application is aimed to prepare the site / affection plan on click of a button within a minute and it can work as an add-on to ATTABU as well independently.



By few simple modifications Attached can be accommodate requirements of other emirates or countries. The pillars Attabu are:-

- Dubai emirates cadastral model that was tailor-made to accommodate Dubai unique requirements , such as :- unique land numbering system for all real-estate considering the variety of land entitlement (granted , rented , private,...etc) .
- Scalable highly secured infra-structure of servers and network that can accommodate future needs of all users & prospective users of all GIS services.
- Standardized international Digital Geospatial data delivery standards of geospatial features and all related attributes. Like: - digital data delivery standards of construction project..
- Geospatial data management technologies that is currently (Oracle & SDE) , which had a greater impact on an affective performance of geospatial data retrieval for source database with in 3 seconds.
- Development languages upon ISO/TC 211 & (Java .net) .

Conclusion:

Benefits of the CMS are:

- Cadastral management System makes updated data available between the departments for immediate cadastral related approvals to the public and thereby reducing the processing time & delays. Users can minimize the time consuming transaction approvals between departments by using this system.
- The system avoids the repetitive work of re-generating the cadastral plans at various departments.
- Digital copy of cadastral maps can be exactly reproduced in hard copy and made available on the internet among various departments and made available to all users with all kinds of associated information.

All these factors make the Cadastral management system and the application highly important for all the developing countries like Dubai.

Thank you

GIS Center – Dubai Municipality

Presenter: Aisha S. , GIS Center , Dubai Municipality

Email : ASKHALFAN@dm.gov.ae