Development of an Advanced Cadastral Management System at the Survey of Israel (SOI)

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Contents

1. Background

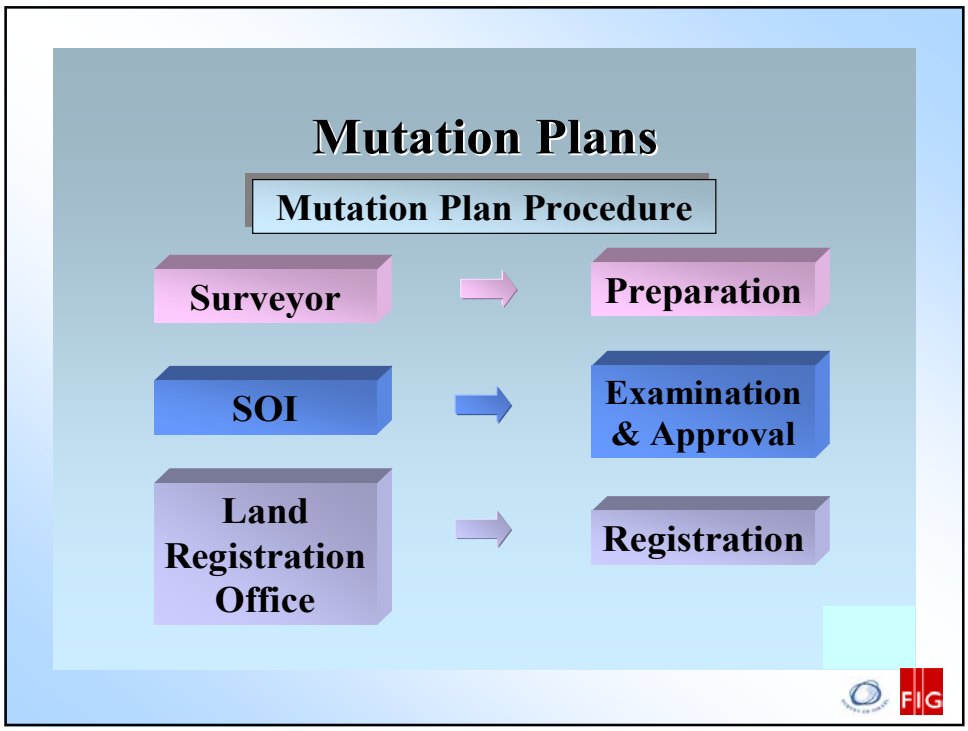
- The Survey of Israel (SOI) is a national agency for geodesy, cadastre and geographic information.

- The cadastre is based on Torrens registration principles.

- SOI is responsible for cadastral boundaries.

- Primary land settlement: almost completed.

Cadastral Procedure (following the primary land settlement)



"SHALOM" project was initiated in 2003 aiming:

- a better cadastral production and management practice

- the development of application fully integrated with improved working procedure and with existing cadastral GIS

2. Goals

- to accelerate land registration

- supporting SOI in supplying cadastral data and running quality control

- implementing an organizational change applying new standards and unified work methods

The basic expectation: Once these goals are achieved, work efficiency will grow, mutation plans will be examined and approved faster whilst keeping a high quality standard, contributing to a faster land registration.

3. System Design

- ***Connecting*** **between SOI, private surveyors and governmental agencies.**
- ***Unifying standards*** **according to the cadastral principles and the survey regulations.**
- ***Reducing the time*** **required for examination and approval of mutation plans.**
- ***Reducing the updating time*** **of the cadastral data in SOI.**
- ***Improving the service*** **to the users.**
- ***Long term managing of supervision and approval*** **.**
- ***Enlarging the management options*****.**

4. System Structure

The system is composed of task-oriented sub-systems:

4.1. Organizational sub-systems for new tasks:

- **Front desk**

- **Planning- and control module**

- **Project manager module**

4.2. Work-flow standardization sub-systems

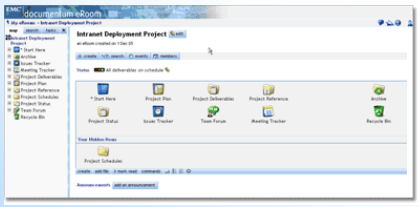
- stages, checklists and go/no go steps
- uniform quality assurance
- compliance with surveyors regulations
- timetable for each cadastral project
- documentation of all relevant components

4.3. Cadastral process sub-systems

- handling a group of mutation plans forming a project – by SOI supervisors / by supervising surveyors
- professional consulting and its documentation
- land settlement process management
- boundary documentation process management

5. Technology

- SHALOM system is based on an ECM (Enterprise Content Management) software by EMC² called "eRoom Documentum".



- A GIS interface has been built as a GIS Portal. Spatial queries can be made by the use of ESRI's ArcIMS.

ESRI

ArcIMS

- A new GIS layer, called "Activity" shows a real time map of cadastral activity as polygons, linked to the corresponding eRoom, allowing users to view and coordinate.

6. Practical Introduction of the "SHALOM"

- The "Beta" version was implemented in the Northern Israel District Cadastre Office at Haifa.

- The Haifa office supervises and approves some 250 mutation plans per year (20% of the total yearly production).

- At Haifa, an in-house developed, sophisticated local management system has been used.

- The "Beta" version of SHALOM was rigorously tested and critically analyzed.

- Some bugs have been identified, changes / further improvements have been demanded by the users.

- Software developers are dealing with the realization of most of them.

- A considerable work of development, test, interactive analysis and further improvement has to be completed.

7. Summary

- The development of an all-embracing cadastral production management system is near its completion.

- It makes SOI capable to manage and to execute in a more effective manner.

- The cadastral workflow is modernized and essentially standardized.

- The system supports but also constrains the user to follow professional, legal and administrative rules and routines, while allowing a reasonable freedom for professional and management considerations.

- The next (critical) stage of the project is the comprehensive implementation of its improved version in the practical production.

-We (the enterprisers, system planners and developers) think that the system is clever, expedient and successful. But a really competent evaluation should be given by the users.

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