



CADASTRAL SPATIAL DATABASE AND WORKING SOFTWARE APPLICATIONS

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ABSTRACT

Cadastre in Greece is under construction for the last eight years. The IT system was not developed until the middle of 2002 where the first database system was actually established. The GIS system began to develop at the end of 2002.

Many in-source applications were developed to provide all the necessary functionality.

As of today, the system implements all the latest technologies thus providing high level compatibility with today's market.



Descriptive data

Registrable rights
 Beneficiaries
 Deeds
 Applications

Spatial data

Municipality Boundaries
 Land Parcels
 Buildings
 Mines
 Exclusive use areas
 Easements
 Orthophotographs
 Digital Terrain Models
 Survey maps

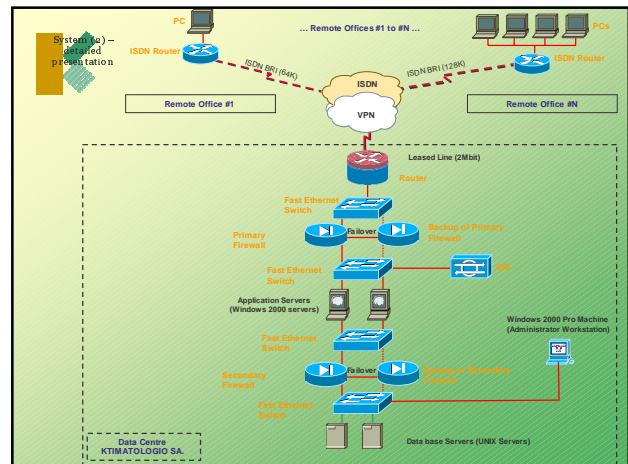
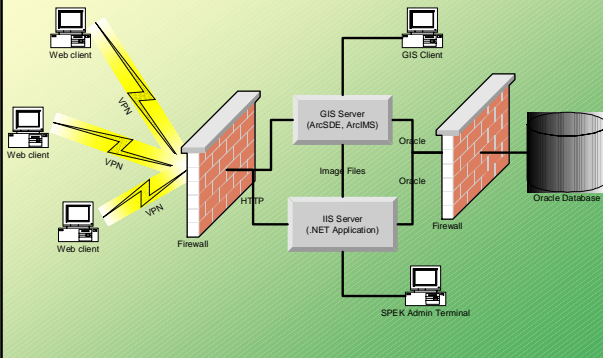


DATA COLLECTED IN TEST ENVIRONMENT

- ◆ 201 MUNICIPALITIES
- ◆ 2.828.000 RIGHTS
- ◆ 1.067.000 PERSONS,
- ◆ 1.780.000 PROPERTIES
 - 896.000 LAND PARCELS
 - 713.000 HORIZONTAL PROPERTIES
 - 77.000 COMPLEX VERTICAL PROPERTIES
 - 58.000 SIMPLE VERTICAL PROPERTIES
 - 30.000 SPECIAL PROPERTIES
 - 18 MINES
- ◆ 556.000 ADDRESSES
- ◆ 2.810.000 DOCUMENTS
- ◆ 38.000 DOCUMENT ISSUERS

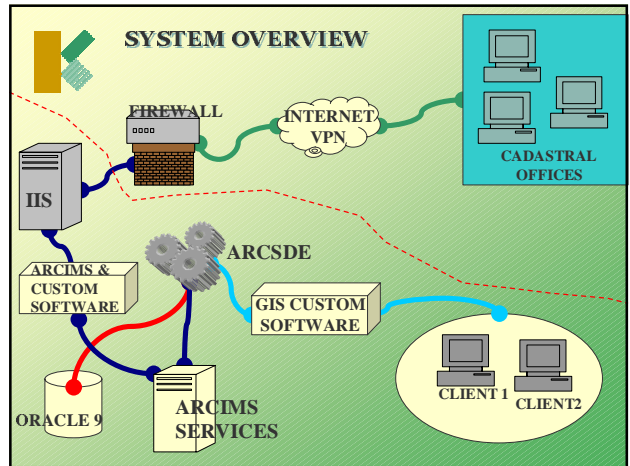


SYSTEM OVERVIEW



GIS

- ◆ GIS and descriptive database systems were developed separately. Both kinds of data are stored and handled by the same database, which is ORACLE 9.2. GIS uses ESRI'S ArcGIS 8.2, ArcSDE 8.2 and ArcIMS 4.01.
- ◆ All Data are stored and handled according to which municipality they belong to. In most cases a whole municipality is handled exclusively by one cadastral office.
- ◆ Restrictions and rules apply to each different dataset, all of which are handled by applications developed in house.



SOFTWARE APPLICATIONS

All the software developed in house can be categorized into the following general categories:

- Quality control software
- Data Loading software
- Data management and editing software
- Product Creation software
- Internet Software

QUALITY CONTROL

- ◆ DATA EXPECTED IN DXF OR SHAPEFILE FORMAT
- ◆ QUALITY CONTROL WITH 2 DIFFERENT APPROACHES
- ◆ OUTPUT DATA IN ESRI'S COVERAGE FORMAT
- ◆ MAIN SOFTWARE DEVELOPED FOR ESRI'S ARC/INFO WORKSTATION 8.2 VERSION
- ◆ SECOND SOFTWARE DEVELOPED WITH ESRI'S MAPOBJECTS 2.2

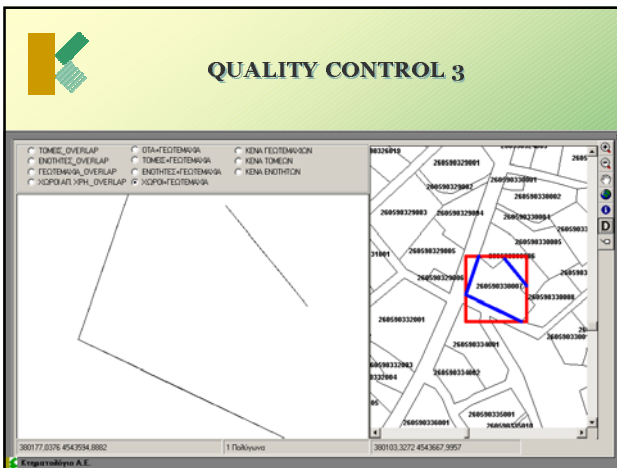
QUALITY CONTROL TOOLS

The screenshot shows a Windows Explorer window displaying a folder named 'db' containing a file named '2009.mdb'. To the right, there is a dialog box for 'KADASTRALNI VEŠTAK (KADASTRALNI VEŠTAK) - Support Tools (Management, Tables)'. The dialog box has several fields and buttons, including 'Endokaj', 'Arhiviranje', 'Kopiranje', and 'Arhiviranje'. Below the dialog box, there is a 'Open' dialog box with the file name '2009.mdb' and the file type set to 'Files of type: *mdb'. The 'Open' button is highlighted.

QUALITY CONTROL 2

The screenshot shows a GIS application window with a map view. A red rectangle highlights a specific area on the map. Below the map, there is a table with the following data:

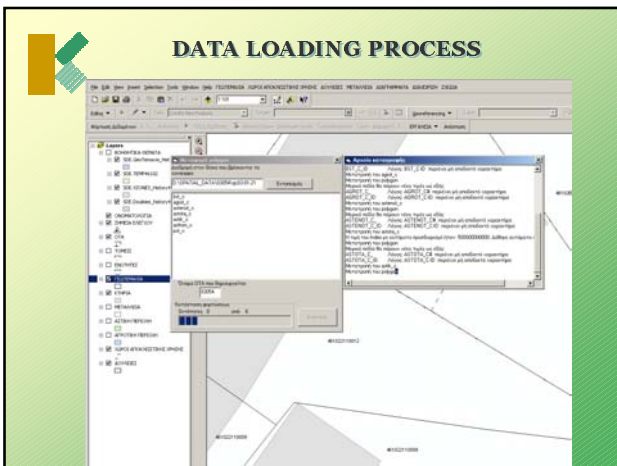
KAZ	GEODARJ	DATABASEAREA	DIFFERENCE
207500113062	1,25726 (2)	1,25726 (2)	0,79000000000000000000
207500113012	0,79 (0)	0,79 (0)	0,99999999999999999999



DATA LOADING SOFTWARE

AUTOMATIC CREATION OF:

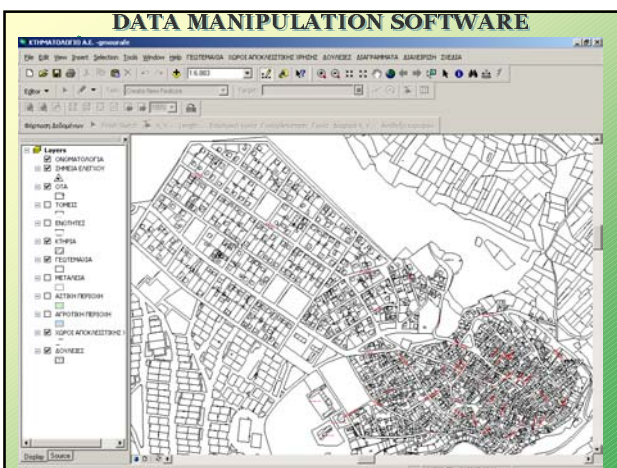
- ◆ DATA INPUT FORMAT IS ESRI'S COVERAGE
- ◆ NEW FIELDS AND NEW VALUES ARE CREATED IN THE LOADING PROCESS
- ◆ NEW FEATURECLASSES
- ◆ NEW DATA FILES AND TABLES
- ◆ NEW INTERNET PAGES



DATA MANIPULATION SOFTWARE

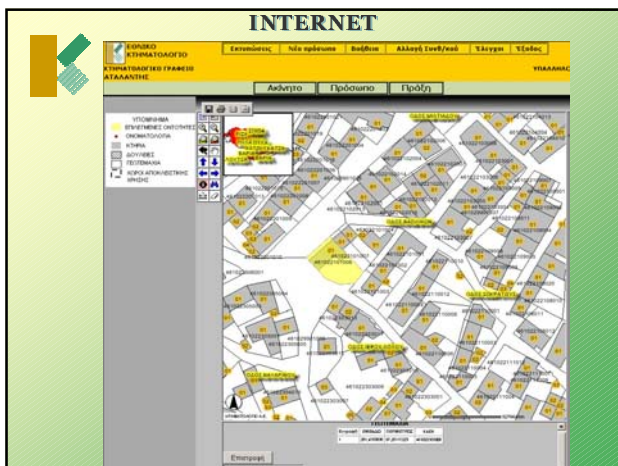
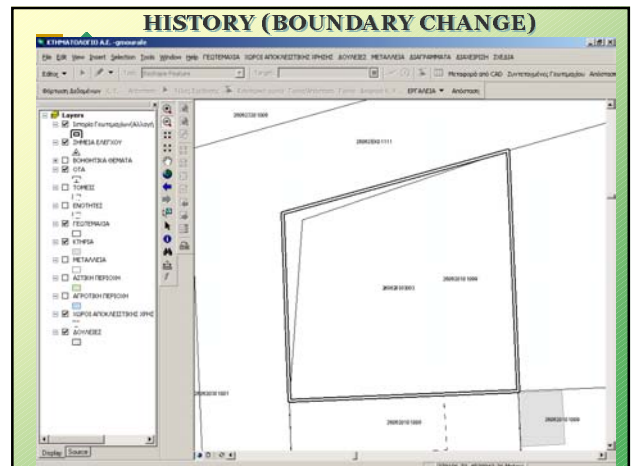
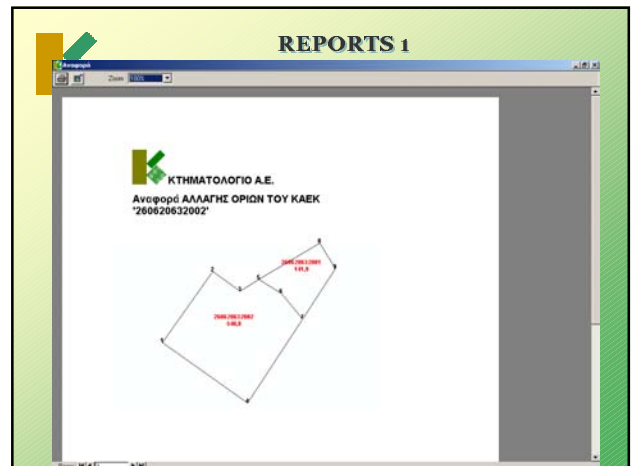
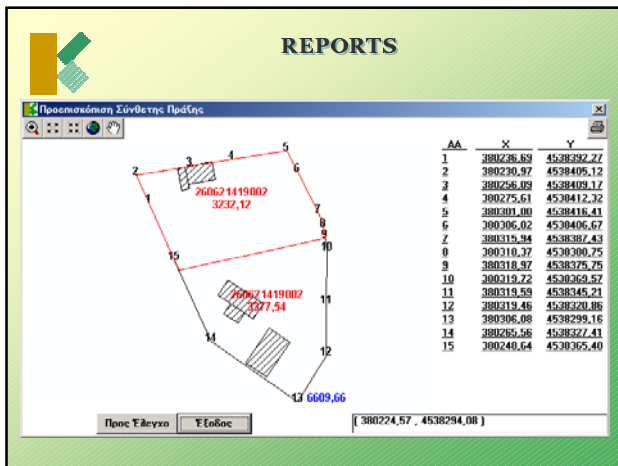
WHY THIS WAS THIS NECESSARY

- ◆ DATA SECURITY AND LOGGING
- ◆ WIZARD LIKE PROCEDURES TO REDUCE HUMAN MISTAKES
- ◆ AUTOMATIC BATCH PROCESSES TO MINIMIZE EFFORD
- ◆ CREATION OF PROCEDURES NOT DIRECTLY SUPPORTED
- ◆ CREATION OF CUSTOMIZED PRODUCTS



FUNCTIONALITY

- ◆ QUERY DATA
- ◆ ALL KINDS OF GEOMETRICAL CHANGES
- ◆ HISTORY
- ◆ TOOLS
- ◆ PRODUCTS



- ### PRODUCTS
- ◆ CADASTRAL SHEET
 - ◆ CADASTRAL EXTRACT
 - ◆ EXTENDED CADASTRAL EXTRACT
 - ◆ CONTROL POINTS
 - ◆ CADASTRAL EXTRACTS (1:5000)

CADASTRAL SHEET

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
ΥΠΟΥΡΓΕΙΟ ΠΕΡΙΧΕΙΡΙΣΜΟΣ ΓΕΩΡΓΙΑΣ

Κ.Α.Α.Ε
ΕΠΙΧΕΙΡΗΣΙΑΚΟ ΠΡΟΓΡΑΜΜΑ

ΑΝΩΤΕΡΟ

ΚΑΔΑΣΤΡΟ

03 027 01 01 008 / 0 / 0

ΓΕΩΤΕΜΑΧΙΟ

ΕΠΙΣΤΑΣΗ ΤΕΜΑΧΙΟΥ	ΕΠΙΣΤΑΣΗ	Κ.Α.Α.Ε
ΚΑΔΑΣΤΡΟ	ΜΕΛΟΣ	ΔΙΑΧΕΙΡΙΣΤΗΣ
ΕΠΙΣΤΑΣΗ	ΚΑΔΑΣΤΡΟ	ΕΠΙΣΤΑΣΗ

ΑΡΧΙΚΕΣ ΕΓΓΡΑΦΕΣ

Ο παρών πίνακας περιλαμβάνει τα στοιχεία των εγγράφων που έχουν καταχωρηθεί στο Κ.Α.Α.Ε. Ο παρών πίνακας περιλαμβάνει τα στοιχεία των εγγράφων που έχουν καταχωρηθεί στο Κ.Α.Α.Ε. Ο παρών πίνακας περιλαμβάνει τα στοιχεία των εγγράφων που έχουν καταχωρηθεί στο Κ.Α.Α.Ε.

Ημερομηνία έκδοσης: 11/09/2003

ΚΥΡΙΟΤΗΤΑ

ΚΑΤΗΓΟΡΙΑ	ΚΑΔΑΣΤΡΟ	ΕΠΙΣΤΑΣΗ	Κ.Α.Α.Ε
ΚΑΤΗΓΟΡΙΑ	ΚΑΔΑΣΤΡΟ	ΕΠΙΣΤΑΣΗ	Κ.Α.Α.Ε
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PLAIN AND EXTENDED CADASTRAL EXTRACTS

PLAIN CADASTRAL EXTRACT

EXTENDED CADASTRAL EXTRACT

EXTRACT OF CONTROL POINTS

ΑΠΟΣΤΑΣΜΑ ΔΙΜΕΒΩΝ ΕΞΑΡΤΗΣΗΣ

0 10000 20000 30000 40000 50000 60000 70000 80000 90000 100000

ΜΕΤΡΑ ΚΑΛ. 1:50,000

FUTURE PLANS

- ◆ WEB SERVICES
- ◆ BETTER QUALITY CONTROL METHODS AND APPROACHES
- ◆ DATA EXCHANGE BETWEEN PUBLIC AND PRIVATE SERVICES
- ◆ OTHER SERVICES