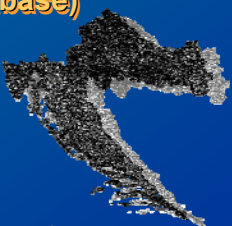


## Development of Cadastral Metadata Service (Cadastral Metadata Database)



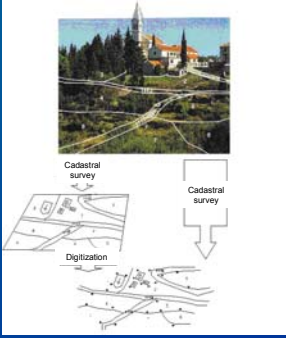
V. Ceti, M. Roić, M. Mader

1 GF, Institute for Applied Geodesy, Chair of Spatial Information Management

### Introduction

## Cadastre


- Multipurpose cadastre (Cadastre 2014)
- Basis of Spatial Data Infrastructure
- Coordinated management
- E-government and E-businesses
- Sustainable development



2 GF, Institute for Applied Geodesy, Chair of Spatial Information Management

### Cadastral system in Croatia

- Classic European system of land cadastral parcels
- 3327 cadastral municipalities
- Cadastre - technical records on the land and real estate (115 regional and local cadastral offices)
- Land book - ownership and other rights (104 offices of the municipal courts) ~ 75 % in digital form
- Descriptive (alphanumerical) part of the cadastral data – 100 % in DBMS
- Cadastral map sheets ~ 30 % in digital form
- Currently Transition from "Land Cadastre" to "Real Estate Cadastre"




3 GF, Institute for Applied Geodesy, Chair of Spatial Information Management

### Support for the Transition Process

- State Geodetic Administration of Croatia ↔ Chair of Spatial Information Management (2005)

#### Goals of Project:

- To develop a data and a system model for a cadastral meta-database system
- Primary as a service for cadastral metadata
- Support to the currently ongoing transition



4 GF, Institute for Applied Geodesy, Chair of Spatial Information Management

### Cadastral meta-database

- Metadata Profile according to HRN EN ISO 19115
- Geometry - Central register of spatial units
- Implementation - Oracle 10g and MySQL database

General characteristics

Name:	CadastralMetadata
Topic:	Cadastre
Language:	HR
Character set:	UTF-8
Standard:	HRN EN ISO 19115 Metapodaci
Description:	Information needed for land management, e.g. purpose and use of land, cadastre, ownership.


5 GF, Institute for Applied Geodesy, Chair of Spatial Information Management

### Cadastral meta-database

#### Datasets

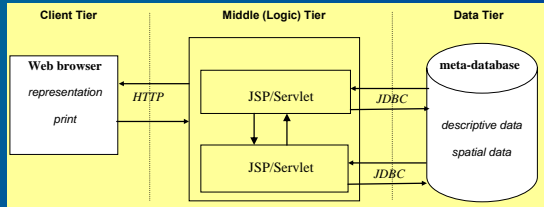
- ◆ Cadastral records
- ◆ Digital cadastral map
- ◆ Descriptive part of cadastral records
- ◆ Sheet of the cadastral map
- ◆ Cadastral field sheet
- ◆ Utility cadastre – technical part
- ◆ Utility cadastre – descriptive part
- ◆ Central register of spatial units
- ◆ Regional register of spatial units
- ◆ Digital ortophoto
- ◆ Digital relief model
- ◆ Supplementary network of permanent geodetic points

Initial data – Island Hvar



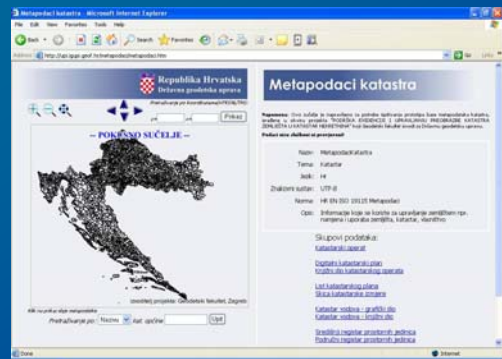
6 GF, Institute for Applied Geodesy, Chair of Spatial Information Management

## Cadastral meta-database



System of management and use

## Cadastral meta-database



Interface for access

## Cadastral meta-database

### Searching by

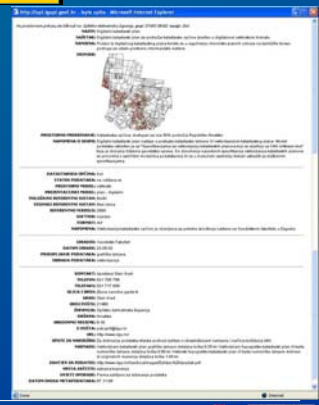
1. clicking on the graphic image
2. entering the name or the unique number of the cadastral municipality
3. entering the numeric coordinates in Croatian state reference system



Short listing of metadata

## Cadastral meta-database

### Detailed listing of metadata



## Cadastral meta-database

### Support for registered users from the State Geodetic Administration

The screenshot shows a query interface with various input fields and dropdown menus. The fields include 'Promjena načina', 'Podaci', 'Data', 'Data set', 'Cadastral municipality', 'Contact', 'Data Producer', 'Production Date', 'Data Condition', 'Scale', 'Reference system', 'Data Acquisition', 'Vertical Reference System', 'Data Processing', 'Software', and 'Format'. There are also buttons for 'Upit' and 'Odjava'.

Query interface

## Cadastral meta-database

The screenshot shows the results of a query. It includes a map of Croatia with a red outline of a specific area. Below the map is a table with columns for 'K.O.', 'Naziv katastarskog operata', 'Datum izrade', 'Mjerilo', 'Referentni sustav', 'Vrsta podataka', 'Obrada podataka', 'Softver', and 'Format'. The table lists various cadastral operations with their respective dates and scales.

Results of query

### Conclusion

- Analysis of the existing cadastral data in the analog and/or digital form
- Concept of cadastral data management through meta-database system
- Further input of metadata
- Facilitation of data availability to the users
- Support to E-government and improvement of the existing NSDI

## Thank you for your attention!



V. Ceti, M. Roić, M. Mader  
[vceti@geof.hr](mailto:vceti@geof.hr), [mroic@geof.hr](mailto:mroic@geof.hr), [mmader@geof.hr](mailto:mmader@geof.hr)