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Transparent Valuation as a Planning Support for Just Land Management System (LMS)



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Chair of Spatial Information Management



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Introduction

- Effective spatial resources management is one of the main features of healthy economic growth of a region
- Land/immovables - more or less attractive depending on difference in position, construction, fertility and/or natural resources
- Valuation is process of assigning values to land locations/ properties



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Real estate valuation

- methods of valuation (choice of methods depends on property):
 - Sales comparison
 - Income capitalization
 - Cost approach method
- Individual - single property valuation
- Mass property valuation



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Mass valuation methods - AVMs

- Mass Valuation – Automated Valuation Methods (AVM):
 - GIS
 - Artificial Neural Networks (ANN)
 - Multiple Regression Analysis (MRA)
 - Combinations

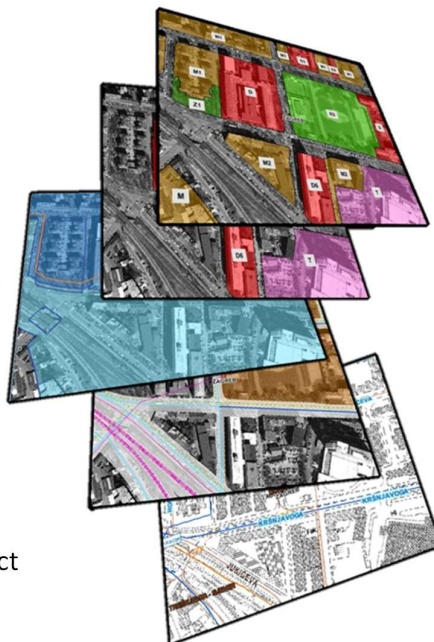


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Mass real estate valuation factors

rural areas:

- Land parcels
- Topographic data
 - (dtm, forest areas, water areas, ...)
- Land quality, rain expectancy, average temperature,
- Legal constraints:
 - Intended land use, district borders ...



urban areas:

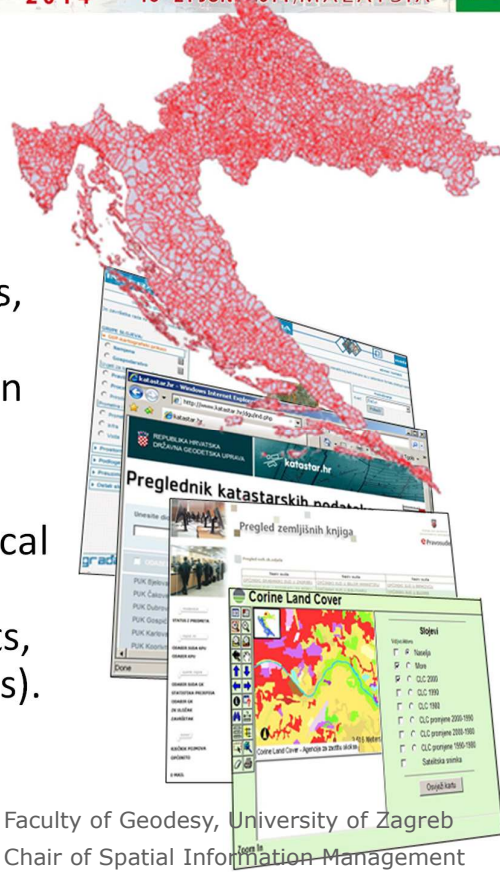
- Land parcels
- Legal constraints:
 - Intended land use, district borders ...



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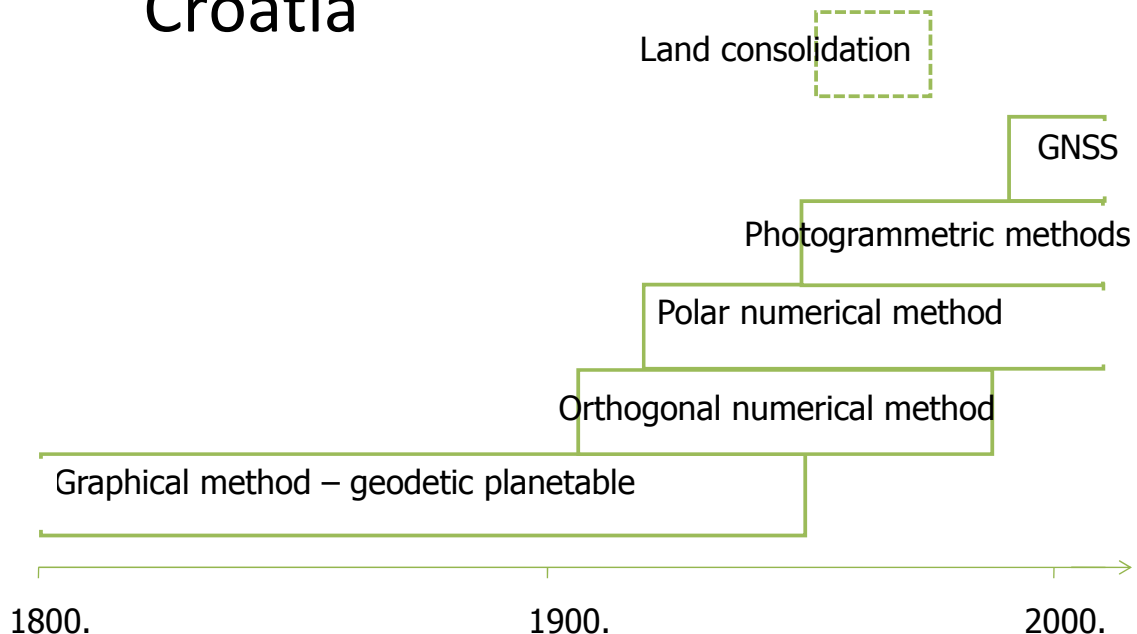
Croatian LAS

- two basic registers:
 - Cadastr - Classic European system of land cadastral parcels, 3327 cadastral municipalities, currently in process of transition from "Land Cadastre" to "Real Estate Cadastre", SGA
 - Land Book - responsibility of Local Courts, registration of property units and associated RRR (Rights, Responsibilities and Restrictions).

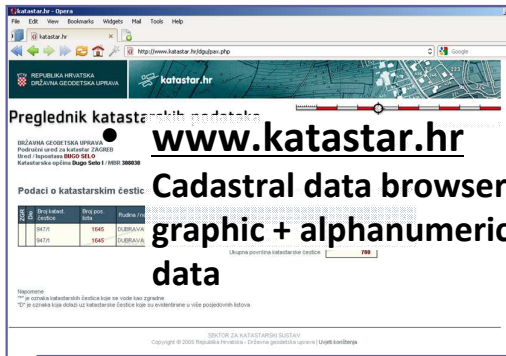


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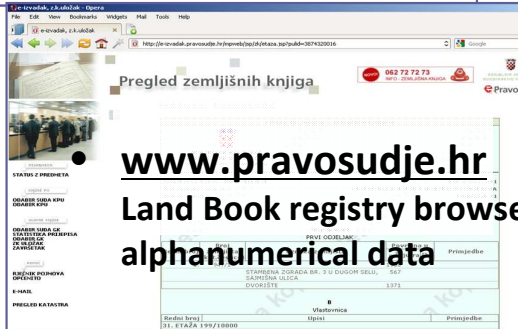
Methods of Cadastral Surveys in Croatia



Current state – web services



www.katastar.hr
 Cadastral data browser,
 graphic + alphanumerical
 data



www.pravosudje.hr
 Land Book registry browser,
 alphanumerical data



UREĐENA ZEMLJA
 Nacionalni program sređivanja zemljišnih knjiga i katastra

Joint Information System (JIS):

establish a common database of the
 cadastre and land registries and a
 single application for keeping and
 maintaining the data
 2003. - end of 2009.

alphanumerical and graphical data

geoportal.dgu.hr – cadastral data,
 WMS – digital orthophoto data and
 topographic data

Croatian current state: mass valuation

- mass valuation for taxation purposes since Franciscan Cadastre - beginning of 19th Century:



- cadastral classification - "*katstarsko klasiranje*":
determination of parcels
agricultural production income
- detailed procedure but irregular maintenance of data
- abolished in 2001

Land Administration/Sustainable Development (in theory)

- sustainable development needs to be based on two opposed concept of care of space:
 - static (Cadastral and Land Register - guarantee existing rights)
 - dynamic (spatial planning, conditioned by urban/rural development program)

Croatian LAS problems (...as is)

- Around 70% of the official cadastral maps (in use today) were made by graphic survey (problem in transition from Land Cadastre to Real Estate Cadastre) - inhomogeneous cadastral data
- Mismatch between data registered in Land Book, Cadastre and on the field

Land consolidation/Land readjustment - current state



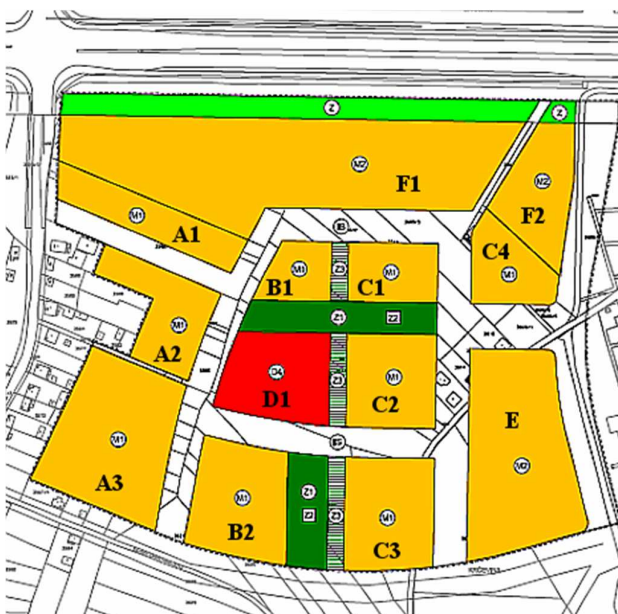
Rural land consolidation:

- till 1959, ~650 000 ha were consolidated (~20% of arable land)
- unenforceable legislation (Law on Land consolidation dates from 1979), new Law on Consolidation in preparation for over 15 years...

Urban land readjustment:

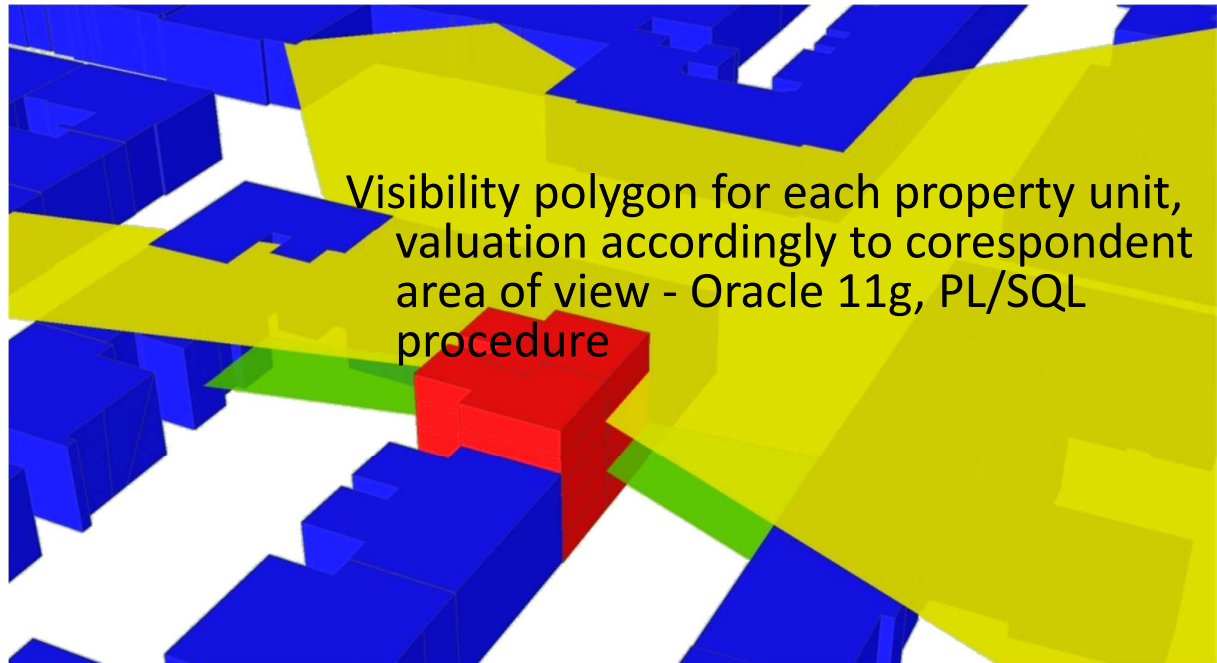
- implemented in 2007 with the Law on Spatial Planning and Building:
"Procedure of merging building land parcels in one whole and its division on building and other parcels in accordance with the detailed urban plan"
- ambiguous and incomplete: considers only square meters - after this legislation no readjustment was conducted

Urban Land Readjustment - example of relative values estimation



Subdivision block	Zone	Block area [m ²]	Floor area ratio	Relative value
A1	M1	3214	1.2	3857
A2	M1	3489	1.2	4187
A3	M1	7919	1.2	9503
B1	M1	1218	2.2	2680
B2	M1	4768	2.2	10490
C1	M1	2400	2.5	6000
C3	M1	4489	2.5	11223
C4	M1	2589	2.5	6473
E	M2	7242	3.0	21726
F1	M2	17243	2.5	43108
F2	M2	3627	2.0	7254
Σ		58198		126498

More detailed mass valuation procedures/analyses



Instead of conclusion

- mass valuation system - great significance in the Urban Land Readjustment procedure (estimating the relative values of parcels before readjustment and new building parcels after completed urban readjustment) and Rural Land Consolidation procedure (same as urban, except different valuation factors)
- transparent and clear valuation procedures as guarantee of the system fairness.

Thank you for your
attention!

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2014 FIFA World Cup: Croatia vs Cameroon
19th June 2014, 06:00 AM