The Cadastre of Real Estates
as a part of
eGovernment and SDI in the Czech Republic

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Presentation outline

Introduction (geospatial)

The Cadastre as a part of eGovernment
• Czech Cadastre and its ICT-supported maintenance for enhancing public administration and public services
• Base Registers as pillars of eGovernment
• New approach in data collection, maintenance and provision

Cadastre as a part of the SDI in CZ and in Europe
• The Cadastre within NSDI/NGII and
• the impact of the INSPIRE and PSI Directives and the DAE

Conclusions

If time enough: From Amsterdam 1992 to Amsterdam 2012
• personal GIS and SDI experiences and their reflection
Where do I come from?

Czech Republic
the Heart of Europe
from Prague

with its historic lessons learned
Organizational chart of the COSMC Sector

Czech Office for Surveying, Mapping and Cadastre

- Cadastral Offices (14)
- Survey and Cadastral Inspectorates (7)
- Land Survey Office
- Research Institute of Geodesy, Topography and Cartography

President

- Departments subordinated directly to the President
  - Internal Audit
  - President's Cabinet
  - Economic Department
  - Inspection Department
  - Legislation Unit

Vice President and Section Director for Land Surveying and Cadastre

Section Director of the Cadastre of Real Estates Central Database
  - Central Database Cabinet
  - System Operation Department
  - Customer Service Department
  - Data Management Department
COSMC and the basics on Czech Cadastre

- The Czech Office for Surveying, Mapping and Cadastre (COSMC) is an autonomous supreme body of the state administration of surveying, mapping and cadastre in the Czech Republic. The president of COSMC is subordinated only to the prime minister of the Government. The Office has its own chapter in the State budget.
- COSMC provides the guaranty and maintenance of the Cadastre of Real Estate in the Czech Republic.
- The current Cadastre was established in 1993 and it integrates the registration of rights and the records of real estate.
- The Cadastre administered with help of the Information System of the Cadastre of Real Estate (ISKN) which is an integrated information support system for both, the state administration of the Cadastre and for providing user services of the Cadastre.
- The central database and related e-services enable to search up-to-date data of the Cadastre throughout the whole Czech Republic by means of the Internet service „Remote Access to the Cadastre of Real Estate“.
- Since June 2006, the electronic outputs can be signed by the electronic mark and have the same significance as the public documents issued by cadastral workplaces.
- In 2010, the Remote Access satisfied 82 % of nearly 6 million requests from the Cadastre. This e-service is used by banks and real estate agencies, municipalities and authorities.
Improvements

Dispersion of Periods for Entry Proceedings between 1. 1. 2008 and 31. 12. 2008 in the Cadastral Office Prague-City

Total number of proceedings: 62,231
Average period for settlement: 25 days
Max. frequency: (3904 proceedings in 14 days)

Development in Number of Provided Information:
Over the Counter (Number of Requests), Electronically (Number of External Outputs-Reports):

<table>
<thead>
<tr>
<th>Year</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information provided in cadastral offices</td>
<td>1,569,246</td>
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<td>1,757,902</td>
<td>1,756,365</td>
<td>1,780,972</td>
<td>1,530,412</td>
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<tr>
<td>Included information provided electronically</td>
<td>1,824,000</td>
<td>2,020,000</td>
<td>2,328,600</td>
<td>2,669,419</td>
<td>3,486,033</td>
<td>3,760,788</td>
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</tr>
</tbody>
</table>

Submissions for Registering of Rights by Record and Notations:

<table>
<thead>
<tr>
<th>Year</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of completed proceedings</td>
<td>485,161</td>
<td>587,824</td>
<td>768,252</td>
<td>910,038</td>
<td>1,064,316</td>
<td>1,190,566</td>
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<td>Period for settlement in months</td>
<td>1.0</td>
<td>0.9</td>
<td>0.7</td>
<td>0.5</td>
<td>0.3</td>
<td>0.3</td>
<td>0.2</td>
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</tbody>
</table>

thanks e-services
Welcome to the Geoportal ČÚZK

**Application**
Search, browse and buy map products and services

**Data sets**
Information about data sets and detailed metadata

**Network services**
Information about data providing by way web services

**INSPIRE**
Information about directive INSPIRE
Access to data
Viewing Cadastre Information via Internet

Aplikace umožňuje získávat některé vybrané údaje týkající se vlastnictví parcel, staveb a jednotek (bytů nebo nebytových prostorů), evidovaných v katastru nemovitostí a dále informace o stavu řízení založených na katastrálním pracovišti pro účely zápisu vlastnických a jiných práv oprávněným subjektům k nemovitostem v České republice, nebo pro účely potvrzování geometrických plánů.


Rychlé odkazy

- Vyhledat parcelu
- Vyhledat stavbu
- Vyhledat jednotku
- Vyhledat řízení
- Zobrazení mapy
Specific requirements regarding Data and Services for Administration Agendas and Decision-making

i.e. the Cadastre of Real Estates

Legal status
Pre-defined procedures
Exact time-reference
Defined competences and access for editors
Authentification, authorisation etc
But also the PSI
Base Registers as pillars of eGovernment

• Together with the new Information system on territorial identification (ISUI), the ISKN is an important source of data for the Register of Territorial Identification, Addresses and Real Estate (RUIAN) being under construction since 2010.
• RUIAN will be one of the Base Registers of the Czech Republic to be launched in July 2012.
• These Registeres will provide reference data for all information systems of the Czech public administration.
• RUIAN outputs will be available for the public via Internet (as non-reference data data sets).
RUIAN and other Base Registers

- **Registry of Inhabitants (ROB)**
  - Ministry of Interior
  - Reference data about inhabitants of the Czech Republic
  - Reference data about foreigners living in the Czech Republic
  - Reference data about other natural persons having rights and duties in the Czech Republic

- **Register of Rights and Duties (RPP)**
  - Ministry of Interior
  - Reference data about legal documents „eSbirka”
  - Reference data about competency of public power bodies
  - Reference data about rights and duties of persons

- **Register of Persons (ROS)**
  - Czech Statistical Office
  - Reference data about legal entities
  - Reference data about self-employed natural persons
  - Reference data about public power bodies

- **Register of Territorial Identification, Addresses and Real Estates (RUIAN)**
  - COSMC
  - Reference data about territorial identification
  - Reference data about real estates
  - Reference data about addresses
The RUIAN Project
Register of Territorial Identification, Addresses and Real Estate

The COSMC is in charge of the project „Creation of the Base Register of Territorial Identification, Addresses and Real Estate and modernization of the Information System of Cadastre of Real Estate“ which is

- based on the Act 111/2009, on Base registers, and
- co-funded by the European Union - European Fund for Regional Development.

Project registration number: CZ.1.06/1.1.00/03.05893
RUIAN content

• **Territorial elements** - parts of the territory defined by boundaries, IDs and relations
  – Elements of the regional division (e.g., regions, districts, municipalities, cadastre units)
  – Parcels
  – Building constructions with house numbers
  – Addresses of building constructions
  – Their mutual relations (links)
  – Localization is provided by coordinates of centroids and address points and boundaries (if possible)

• **Territorial units** – territorial elements of equal type, which do not have boundaries, e.g., parts of municipalities, streets
Administrative Units according to RUIAN – Associations

- ISKN
- ISUI
- ISKN/ISUI

25-04-2012
Remote Public Access (VDP- Pilot)

Veřejný dálkový přístup

k datům registru územní identifikace, adres a nemovitostí
Obec, vojenský újezd - detail

Region soudržnosti: Jihovýchod
Kraj (VÚSC): Jihomoravský
Kraj (1960): Jihomoravský
Okres: Vyškov

Obec s rozšířenou působností (ORP): Bučovice
Obec s pověřeným obecním úřadem (POU): Bučovice

Název: Malínky
Status: Obec
Rozsah členění:
Typ členění:
Statistický kód LAU 2: CZ0646593290

Vlajka:

Znak:

Ve stříbrném štítě z černé položené ostrve se suky doleva vyrůstají dva překřížené zeleně malinové stvoly, každý se třemi listy a jednou svěšenou červenou malinou po straně.
Adresní místo - detail

Obec: Praha (okres Hlavní město Praha)
Část obce: Žižkov
Městská část: Praha 3
Ulica: Vinohradská
PSČ: 13000

Číslo domovní / orientační: 1942/129

Řádek 1: Vinohradská 1942/129
Řádek 2: Praha
Řádek 3: 13000 Praha 3
Zobrazení mapy

Josefov

Definiční bod parcely
50 Josefov
Podrobnosti

Podrobnější informace k používání mapy, aktualizaci dat a jejího obsahu jsou uvedeny v návěsce (PDF formát).
RUIAN Export Files
- RUIAN exchange format (VFR)

- The VDP Application will provide 2 sorts of export files (in VFR), depending on the validity of data required:
  - Monthly copies *(focused on municipalities)*,
  - Change reports *(daily – the whole state)*.

- The VFR files will be available as a *basic data set* (without location details) or as *complete data sets* with all location details and relations.

- The VFR uses the *GML 3.2.1*.

- The export files available free of charge for both, the public and the non-commercial re-use by private sector.
## Výměnný formát

<table>
<thead>
<tr>
<th>Obec</th>
<th>Platnost údajů</th>
<th>Časový rozsah</th>
<th>Datová sada</th>
<th>Územní prvky</th>
<th>Výběr z údajů</th>
<th>Název souboru</th>
<th>Download</th>
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</table>
Cadastre and RUIAN within NSDI and the impact of the INSPIRE

• The needs of PA and INSPIRE are not equal.
• The data set Parcels compliant with the INSPIRE requirements for interoperability has been produced and published by COSMC since 2011.
• The INSPIRE compliant datasets regarding addresses, administrative units and buildings will be generated from RUIAN and published in 2012-13.
• The outputs of RUIAN should contribute to the ELF (by Eurogeographics) and support building-up INSPIRE in CZ and Europe (as a source of up-to-date data).
RUIAN and INSPIRE

*measures done/needed for ensuring interoperability*

<table>
<thead>
<tr>
<th>Infrastructure components / interoperability levels (EIF)</th>
<th>Legal</th>
<th>Organisation</th>
<th>Semantic</th>
<th>Technical</th>
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<tbody>
<tr>
<td>Spatial data</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Metainformation</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Network services</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Coordination + monitoring</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Sharing condition for data and services</td>
<td>X</td>
<td>X</td>
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<td>Funding</td>
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<td>X</td>
<td>X</td>
<td>X</td>
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<td>Education, awareness raising</td>
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</table>
Governance and Planning are needed

• Several structures, which overlap and cooperate (more or less)
  – COSMC - Internal coordination for INSPIRE and SDI
  – National platform (Nemoforum)
  – RUIAN focused cooperation across public administration levels and among several central PA bodies
  – KOVIN – national coordination committee for INSPIRE
  – EU governance machanism for eGovernment
COSMC’s in house coordination measures for INSPIRE and SDI

**INSPIRE/SDI coordination group** lead by COSMC’s vice-president; *10 persons, 4-6 per year*

**WG's:** INSPIRE DataSpec&Testing, RUIAN-INSPIRE (5-7ps)

RUIAN executive committee; *12ps, weekly*

INSPIRE as a **specific topic** of COSMC’s Geoportal WG
Mission

On the basis of cooperation of public institutions, professional (private) institutions as well as an academic sector Nemoforum wants to contribute to the development of a functional e-government in the Czech Republic with the aim to establish a quick and simple communication in the field of land- and real estate information between public administration and citizens.

Nemoforum intents to promote solutions for various connected issues in line with European and other world developments in order to meet the needs of users, producers and administrators of these data.

Ten years ago, the “National Geo-Information Infrastructure of the Czech Republic” (NGII) was formulated by the Nemoforum Association and approved as a 5-year program document linked to the State Information Policy.

Register of Territorial Identification, Addresses and Real Estate was among its aims (project nr.6.5).
Editors

- RUIAN Administrator - COSMC
- Municipal offices
  - Local
  - Specialized
- Czech statistical office

= nearly 8000 bodies of PA;

for more info see www.ruian.cz
National coordination committee for INSPIRE established in November 2010 and its working groups since April 2011
Data and services within an evolving environment

EUROPEAN INTEROPERABILITY FRAMEWORK FOR EUROPEAN PUBLIC SERVICES

The EU initiatives shown below illustrate, from a historical perspective, the support provided at political level for interoperability among public administrations.

Timeline of EU initiatives concerning interoperability
Conclusions:
There are different ways how we imagine and plan our future
The methods can differ
The reality may differ
Where we are and where we want to be? The Office, Sector, Region, CZ...

- What is common and what is specific?
- What is the purpose of the data or services?
- Which role does it mean?
- Who are the partners?
It is important to:
Choose the direction
And keep it
be aware that challenges will occur
...and surprises will cross our path
Try to understand the history and respect its (spatial) logics and rules

• Recent data opening and the convergence of tools remind on braking the medieval town-walls – a dynamic and large spread will happen (with winners and loosers and a new scenery later).
• A newly-spatially-literate population might come in a stable political context and if resources and tools available.
Thank you for your attention

Eva.Pauknerova@cuzk.cz
From Amsterdam 1992 to Amsterdam 2012

1992:
- 1st EGIS conference and 1st issue of GIS-Europe journal …
- The Zďarske vrchy GIS Pilot focused on landscape protection and management was presented by Remote Sensing laboratory for National Protection of Monuments and Nature (member of a Czechoslovak-British Team)

1997 – PM‘s advisor (learning the need to encourage the politiciens to be spatially aware; and to check all the information provided by others)

2002 – the 1000-years flood …

2007 – the INSPIRE and PSI Directives started changing (more or less) the existing FW and approaches

2012: Geospatial World Forum with a global scope;
- the national base register starts to be reality;
Black Triangle – KRNAP GIS Pilot

Modelling impacts and risk by forest damage to water resources using GIS SPANS
And the broader context as:

The European Digital Agenda Governance Cycle

European Council

↑ reporting to

European Digital Agenda (Yearly Communication)

Member States High Level Group

Digital Agenda Assembly (Summer)

European Parliament Representation

Stakeholder Engagement

Digital Agenda Scoreboard (Staff Working Paper)