



# **GNSS Activities at VSB – Technical University of Ostrava, Czech Republic**

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# Content

- VSB – Technical University of Ostrava
- Institute of Geoinformatics
- Geoinformatics study branch
- GNSS as a part of geoinformatics
- Our activities



# VSB – Technical University of Ostrava

- Polytechnical university (faculty of economics, mining and geology, electrotechnics and informatics, precautionar sciences, etc.)
- Established more then 150 years ago
- More then 19 000 students
- Nearly 3 000 employees



# Institute of Geoinformatics

- Established in 2002
- History from 1993
- 10 employees
- 10 PhD students in regular study
- Complex system of geoinformatics education
- Research and development projects



# Geoinformatics study branch

- Bachelor degree
- Engineering degree
- PhD degree
- All of them in regular and distant form
- Life-long education
- More then 320 students at present
- Habilitation nad professor titules




# GNSS as a part of geoinformatics

- Two subjects taught:
  - Global navigation satellite systems
  - Geoinformation technologies
- Student projects
- Diploma theses
- PhD theses



# Research and development projects

- We are under process of establishing two reference DGPS stations:
    - At our building in Ostrava (GPS+GLONASS)
    - At the top of Lysa Hora hill (GPS only)
  - Ostrava will be included into CZEPOS
  - Both will be part of the DGPS network for checking of CZEPOS
  - At least one of them should be part of EUREF
- 

# Research and development projects

Applications of GPS and DGPS in the field of:

- Intelligent transport systems
  - Hazardous materials transport monitoring
  - Dynamic navigation
  - In car units (Intel)
- Emergency response services
- GPS meteorology (CHMI, VUGTK)





# Research and development projects

- Field mapping:
  - Development of database of landslides in Moravian-Silesian Region for regional government (more than 700 areas) (2004-2005)
  - Mapping of natural protected areas in Moravian-Silesian Region for national Nature and Landscape Protection Agency (2003-2004)



# Research and development projects

- GNSS for international projects:
  - Trans boundary catchment management (TRANSCAT) (2003-2005; 5<sup>th</sup> FP of EU)



# Research and development projects

- Other projects:
  - MIDAS – metainformation system about geodata sets used in the Czech Republic, developed in cooperation with the Czech association for Geoinformation for the Ministry of Informatics, nowadays metainformation system of public government

<http://gis.vsb.cz/midas>

(in Czech only)



## Hlavní MENU

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- [O autorech](#)
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- [MIDASLite](#)
- [MIDAS do praxe](#)
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- [Úvodní stránka](#)
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## Datový soubor

[Podle abecedy](#)[V mapě](#)[Podle organizací](#)

[rozšířené>>](#)**Veřejná správa a služby**

Legislativa, Administrativa, Doprava, ...

**Příroda**

Ekologie, Fauna, Voda, Nerosty, Ovzduší, ...

**Společnost**

Bezpečnost, Školství, Historie, Myslivost, ...

**Ekonomické aktivity**

Bankovníctví, Průmysl, Zemědělství, ...

**Polohopisná a výškopisná data**

DPZ, Základní mapy, Geokódování, Geodézie, ...

**Využití území**

Katastr, Limity, Územní rozvoj, ...

**Infrastruktura**

Doprava, Inženýrské sítě, ...

**Správa a ochrana majetku**

Bezpečnost, Krizový management, Pojišťovny, ...

# Research and development projects

- Other projects:
  - WebCastle – case study locator
    - metainformation system about european GI projects
    - developed for EUROGI
    - EUROGI selected this metainformation system as the only system in Europe
    - we continue development of the WebCastle and its permanent operation at our server cluster

<http://gis.vsb.cz/webcastle>



## Welcome to WebCastle



>>[Enter New Version 2.3](#)<<

**Web based Case study locator is developed in a framework of the [GINIE project](#)**  
**The case study services should raise the awareness of the benefits to be enjoyed from the use and exploitation of geographic information and brings the benefits of GI towards [European] citizens.**

The main objective of WebCastle is deposition, maintenance and distribution of description of case studies. The core description is formalised through metadata, which are compliant with ISO 19115 (metadata for geographic information). The short description of metadata items can be visited in a proposal of [Metadata items](#).

Except of case studies Webcastle enables a description of organisations, persons and documents, which are related to case studies. WebCastle offers searching engine for all type of registered objects and retrieving information, link to original sources and related subjects.

**We need your participation. Webcastle NEEDS TO BE POPULATED with case studies**

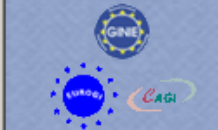
Please send any comments to [Jan Ruzicka](#)

Authors: Jiri Horak, Bronislava Horakova, Jan Ruzicka, Eva Pauknerova, Tomas Duchoslav [VSB-Technical University of Ostrava](#) + [CAGI](#)  
(Czech associaton for geoinformation), Ostrava - Prague, Czech Republic



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- Person
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- Picture Book



## Case study

• SHOW ALL

• SELECTING BY:



alphabetic



category



organisation

• SEARCHING TEXT

FIND!



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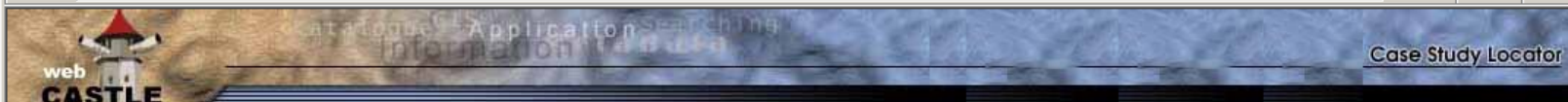
- [A National and Regional Development And Spatial Planning Information System \(TelR\)](#) The TelR project was first launched in 1995 at the assignment to the Regional Development Office of ...
- [An environmental Atlas of city of Prague](#) The Atlas Project provides current and past environmental information on Prague. Information is main...
- [An interactive Environmental Atlas for Slovenia](#) The information systema and Atlas was developed in response to the Slovenian policy of access to pub...
- [Coastal Management in Catalonia](#) Information Service about the Catalanian Coast for all those involved in the management of the coast...
- [Drawing the Boundaries](#) The UK Countryside and Rights of Way Act 2000: the right to roam required the publication of all ope...
- [Early Warning and Information System for Geologic Hazards in Iceland](#) Living in a region of the world where there is a lot of seismic activity as in Iceland that sits ast...
- [Educational support programme: StrateGIS](#) The StrateGIS project is a nation-wide Swedish educational programme aimed to enhance the use of geo...
- [Flood Control Information System](#) The Flood Control Information System is an Internet system for public purposes, which accesses the ...
- [Genetic research into cardiovascular disease](#) The main objective of the research project was to identify the family form of the "aortic stricture...
- [Healthcare](#) Promoting the healthcare quality for all at a cost as low as possible is an objective for decision m...
- [Hungarian vineyard register \(VINGIS\)](#) In order for Hungary to be eligible for the European Union (EU) funds, the MARD, as the coordinating...
- [Maps and Beauty](#) Strategic planning, tactical selling and for monitoring the growth of a sales region.
- [Maps for Meteorological Forecasting](#) State of the art meteorological and hydrological system that provides accurate weather forecasts for...
- [Planning of sale, transport and marketing](#) Planning of sale, transport and marketing regions with the help of the Business Mapping System DISTR...
- [Planning Public transport](#) To enable the respective department of the state of Lucerne, to develop a key to distribute the budg...
- [Reducing Road Casualities](#) The objective was to monitor road casualties with the objective redesigning road layouts to improve ...
- [Reorganising field service for improved expansion](#) Using maps, a company"s field service was reorganised. Subsequently expansion in the market was...
- [Reorganising the Ambulance service](#) The new regulation on working hours in France stimulated the ambulance service operators of the dépa...
- [Rescue and Assistance Services](#) The introduction of client-server technologies and the GIS technology enabled a significant improve...
- [Road Safety: Intelligent Speed Adaptation](#) Between 1999 - 2002, the Swedish National Road Administration conducted a large-scale trail involin...
- [Seamless Citizen Service Delivery](#) Local government is responsible for the delivery of a very wide range of services to the local commu...
- [Silence Map of the Netherlands](#) Creating a silence map. By making visible these silence islands it is possible to indicate the speci...
- [Slovenian Citizen Oriented Information Service](#) A one-stop-shop for online information about Slovenia
- [Spatial coherence of ecological networks for Western Europe](#) The Netherlands is actively working on the realisation of a European ecological network of which the...
- [Stock Farming – Stench Policy!](#) In 1998 the Netherlands needed to review the national policy related to the impact of the odour orig...

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Number of records: 34

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z I





## Main MENU

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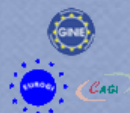
## Case study

## Organisation

## Person

## Document

## Picture Book



## Case study

## Identification

|       |  |
|-------|--|
| Title | An environmental Atlas of city of Prague |
|-------|--|

## Description

|                       |  |
|-----------------------|--|
| Abstract              | The Atlas Project provides current and past environmental information on Prague. Information is maintained and provided by the City of Prague. |
| Language (s)          | English  |
| Character set(s)      | usASCII  |
| Purpose of production |  |
| WWW address(s)        |  |

## Extent (temporal, spatial)

|                             |   |
|-----------------------------|---|
| Geographical areal(s)       | Czech Republic                              |
| Timeframe of case study     | Time period of case - 2001 thru to May 2004 |
| Date of case study creation | 2001  |

## Classification

|              |   |
|--------------|---|
| * ISO Topics | boundaries, elevation, environment, imageryBaseMapsEarthCover     |
| Keywords     | environment, impact assessment, Agenda 21, freedom of information |

## Metadata of metadata

|                             |   |
|-----------------------------|---|
| Date of the metadata update | 13 November 2003  |
| Metadata language           | English   |
| Metadata character set(s)   | usASCII   |
| Metadata contact (s)        | Persons: <a href="#">Solc</a>   Organisations: <a href="#">City of Prague</a> |

## \* Related organisations

[City of Prague](#) (Is Publisher of, Is Metadata contact of, Is Author of) viewed object

## \* Related persons

[Solc](#) (Is Contact point of, Is Metadata contact of) viewed object

## Related case studies

No records

## Related documents

No records

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Logged user: guest, Metadata owner: GINIE

http://gis.vsb.cz/webcastle/doc/CR\_CaseStudy2\_PragueV4.pdf - Microsoft Internet Explorer

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Address http://gis.vsb.cz/webcastle/doc/CR\_CaseStudy2\_PragueV4.pdf Go Links

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## Case Study

**An Environmental atlas for the City of Prague**  
Jaroslav Solc/ City of Prague [Jaroslav.Solc@cityofprague.cz](mailto:Jaroslav.Solc@cityofprague.cz)  
Petr Hurych/ Hydrossoft Veleslavin, [hurych@hv.cz](mailto:hurych@hv.cz)

**Keywords** – Environment, Impact Assessment, Agenda 21, Freedom of Information



### Description of Application

The City of Prague has since the early 1980s collected and maintained environmental data on the territory of the City of Prague.

# Conclusions

- We feel GNSS as an integral part of geoinformatics and geoinformation technologies
- GNSS is key component of any mobile geoinformation technologies and their applications dealing with spatial information in the field



# Conclusions

- We develop many educational and research activities, both on the national and international level
- We are open to cooperation on both levels



**Thank you.**

