

Internet and Spatial Data Infrastructure - Towards a Spatial Society

Vlado Cetl, dipl. ing., prof. dr. sc. Miodrag Roić, Hrvoje Matijević, dipl. ing.
University of Zagreb, Faculty of Geodesy, Institute of Engineering
Geodesy and Spatial Information Management, Kačićeva 26, Zagreb,
e-mail: vcetl@geof.hr, mroic@geof.hr, hmatijev@geof.hr

Introduction

- **Information and communication technologies change the world that we live in**
- **A society "hungry" for information is limited in its development**
- **80% of all accessible information contains some spatial component**
- **Without spatial data it is impossible to manage the space efficiently**
- **In the last two-decade the amount of spatial data that has been collected in digital form has increased dramatically**

Spatial Data Infrastructure

- The term “Spatial Data Infrastructure” (SDI) is often used to denote the relevant base collection of technologies, policies and institutional arrangements that facilitate the availability of and access to spatial data
- SDI hosts geographic data and attributes, sufficient documentation (metadata), a means to discover, visualize, and evaluate the data and some method to provide access to the geographic data

Core Components of the SDI

Clearinghouse (catalog)

Metadata

Framework

GEOnata

Standards

Partnerships

Types of spatial data

basic sets of spatial data:

- digital orthoimagery,
- geodetic control,
- elevation,
- transportation,
- hydrology,
- administrative boundaries,
- cadastral or ownership information,
- ...

Development of Spatial Data Infrastructure

- By the early 1990's, the concept of SDI development was being proposed in support of accelerating geographic information exchange standards efforts, selected national mapping programs and the establishment of nation-wide spatial information networks in the United States, the United Kingdom, Canada and the European Community

The USA

- A critical national need for improved means for finding and sharing geographic data was recognized by President Clinton in Executive Order 12906 of April 1994
- This document called for the establishment of a coordinated National Spatial Data Infrastructure (NSDI) "to support public and private sector applications of geospatial data in such areas as transportation, community development, agriculture, emergency response, environmental management and information technology"

Clearinghouse Gateway Search Page - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://130.11.52.184/servlet/FGDCServlet?srp=2> Go

National Spatial Data Infrastructure Clearinghouse Search Form

Define the Geographic Area of Coverage [Help...](#)
Specify a query region by selecting or entering values

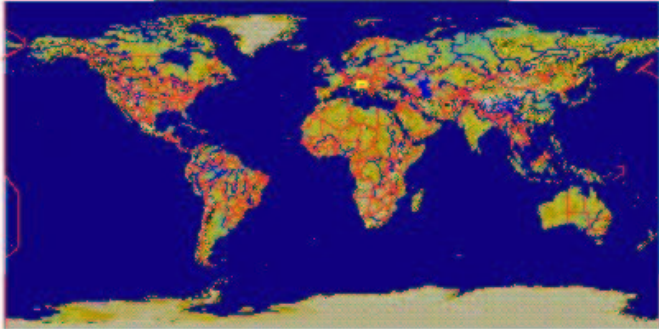
Don't search based on location Use coordinates from a place name:

Pick names from:
 United States
 International place name lists.

Congo
Costa Rica
Croatia
Cuba

Zoom to Selected Place

Enter bounding coordinates:
If you interact with the map to set coordinates, select this option



North West East South

46.84 13.47 19.92 42.09

Zoom to Rectangle Zoom to Globe

Done Internet

<http://130.11.52.184/FGDCgateway.html>

Canada

- The Canadian Geospatial Data Infrastructure (CGDI) is a distributed set of data, as well as services and applications that enable the sharing and use of geospatially referenced information
- Canada has developed CEONet (Canadian Earth Observation Network) technology
- CEONet is a geospatial data clearinghouse that provides access to organisations, products and services from across Canada and around the world

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Address <http://ceonet.gc.ca/api?Frames=y&Lang=en&Request=PageLayout&Type=homepage> Go

GeoConnections Discovery Portal

Discovery Portal GeoConnections Overview Help/FAQ Feedback Français

Canadian Geospatial Data Infrastructure

Search for data

For example, choose "Ontario" as the Location and "Geology" as the Subject and click the search button. [Tutorial](#)

Location North West South East

Subject ... and keywords

Tips: +requires, -excludes, quote to "search for phrase"
Example: monitor +"air samples" -temperature

Time period

Product type This criteria is only applied to data supplied by Canadian organizations.

Alphabetical list of database names

[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](#) [Other](#)

Other lists

[All databases searchable over the Internet](#)

Internet

<http://ceonet.gc.ca/>


Australia and New Zealand

- Commonwealth Spatial Data Committee (CSDC) and Australia New Zealand Information Council (ANZLIC) are promoting actively the concept of SDI to provide fundamental data needed to support decision making
- An important component of the Australian SDI is a national directory of available spatial datasets, the Australian Spatial Data Directory (ASDD)

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Address http://www.auslig.gov.au/servlet/asdd_power Go

 **Australian Spatial Data Directory (ASDD)**
Power search interface
[home](#) | [about](#) | [tech](#) | [basic search](#) | [power search](#) | [status](#) | [feedback](#) | [help](#)

- Define your query using at least one of the four groups of controls (spatial, date, text, controlled terms)
- Select one or more nodes at which to search
- Press the search button at the bottom

Note: you must enable JavaScript in your WWW browser
See [brief help](#) and [more help](#) and the Explain buttons at each section

Spatial: Define the Geographic Area of Coverage Explain...


Specify a region of interest by selecting from the list, using the map interface or by entering coordinate values.

Do not search based on location

Use coordinates from place name:

Australia

Choose coordinates of interest by clicking on this image. A map interface will be generated in another window.



Enter bounding coordinates:

	North	
	<input type="text" value="-8.5"/>	
West		East
<input type="text" value="111"/>		<input type="text" value="155"/>
	South	
	<input type="text" value="-44"/>	

Internet

<http://www.auslig.gov.au/asdd/>

The United Kingdom

- In 1995, the National Geospatial Data Framework (NGDF) was designed as a facilitator with a mission to develop an overarching UK framework to facilitate and encourage efficient linking, combining and widespread use of geospatial data which is fit for the purpose
- A major NGDF project under way is the NGDF Metadata project, which will set up a directory service to bring together through the Internet those who are providers of geospatial data with the users of such data

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Address <http://dataintegrator.askgiraffe.org.uk/> Go

The UKSGB

ask Giraffe

United Kingdom Standard Geographic Base

The United Kingdom Standard Geographic Base (UKSGB) aims to provide users and suppliers of geographic information with a standard and consistent approach to commonly used geographical areas in the United Kingdom.



The UKSGB is made up of the following themes:

Addresses	Streets	Postcodes	Property parcels	Admin / voting boundaries	Census geography
					

Click on the theme of your choice to find out the organisations responsible for that theme's

ask Giraffe the data integrator

ask Giraffe Home

UKSGB
Definitive Products
What and Why?

Future Plans
Guidelines
Terminology

Demonstrator
Documents
Feedback

Internet

<http://www.ngdf.org.uk/>

Hungary

- The reason for developing the National Spatial Data Strategy was, among others, that the gathering of mapping data is costly
- The elaboration of the Government's National Spatial Data Strategy collected the professionals in the interests of preparing documents for making government-level decision
- Setting-up of NSDI in Hungary is in progress, as well as multiple projects which will contribute to the building of the NSDI. Hungary has a great help of the European Union in all that


Slovenia

- Slovenia has within so called “Environmental Project”, financed by the International Bank for Reconstruction and Development (IBRD-The World Bank) launched a project ONIX - Establishment of Slovenian geoinformation infrastructure
- Works on establishing geoinformatics infrastructure in Slovenia resulted in the building of geoinformatics portal, and some further projects which are to enable electronically access to spatial data bases in Slovenia

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Address http://www.sigov.si:81/ Go



GI portal
Geoinformacijski center

ponedeljek, 26. avgust 2001

| GIS borza | Projekti | Mednarodno sodelovanje |  |

Predstavitev GIC

- Kdo smo
- Strategija
- Zaposleni
- Komunicirajte z nami

Zadnja novica

Mednarodni posvet g-Slovenija v e-Evropi

Zveza geodetov Slovenije v sodelovanju z Združenjem za poslovanje z nepremičninami pri Gospodarski zbornici Slovenije in Zvezo Geografskih društev Slovenije skupaj z Znanstveno raziskovalnim centrom Slovenske akademije znanosti in umetnost vabi na mednarodni posvet g-Slovenija v e-Evropi... (več)

GIS borza

**Centralna evidenca prostorskih podatkov
Metapodatkovni sistem**

V CEPP je do sedaj več kot sto upravljalcev prispevalo preko štiristo opisov prostorskih podatkov. (več)

Naročanje in posredovanje podatkov

Poskusno uvajanje aplikativne rešitve za elektronsko naročanje in posredovanje prostorskih podatkov EDPP. (več)

ETC/CDS katalog podatkovnih virov

Katalog podatkovnih virov je zbirka metapodatkovnih opisov o informacijah in podatkih o okolju. (več)

Seznami

- **Organizacije v Sloveniji**

Organizacije v Sloveniji, ki nudijo ali potrebujejo storitve s področja geoinformatike in geomatike. (več)

Programska oprema

- **MPedit**

Orodje za podporo evidentiranju in dokumentiranju prostorskih podatkov (več)

- **Proval**

Orodje za modeliranje in izvajanje rastrskih analiz in je nekoliko specializiran za uporabo pri presoji vplivov na okolje, izdelavi modelov ranljivosti... (več)

Projekti

- Onix
- Metapodatkovni sistem
- ISG
- Regionalni projekti
- Koordinacija

Aktualne informacije

- **Zasnove elektronskega dostopa do prostorskih baz**

[Vrsta: Novosti GI portala][16.03.2001]

Na voljo je priprava zasnove elektronskega dostopa do prostorskih baz Geodetske uprave in zasnove elektronskega poslovanja s temi podatki (več)

- **Priporočila za pripravo politike posredovanja prostorskih podatkov**

[Vrsta: Novosti GI portala][16.03.2001]

Na voljo so priporočila za pripravo politike posredovanja prostorskih podatkov (več)

- **Naročanje in posredovanje podatkov**

[Vrsta: Novosti GI portala][10.03.2001]

Poskusno uvajanje aplikativne rešitve za elektronsko naročanje in posredovanje prostorskih podatkov EDPP. (več)

- **MPedit/CDS**

[Vrsta: Novosti GI portala][10.03.2001]

V uporabi je orodje MPedit 2.0 CDS, ki temelji na različici ETC/CDS standarda za prostorske metapodatke. (več)

Geoinformatika v Sloveniji

Geoinformatika v državni upravi

- **Rezultati projekta GII omrežja**
- **Zasnova GI - podportala**

Geoinformatika v lokalni skupnosti

- Hrastnik
- Koper
- Krško
- Maribor
- Namere

Mednarodno sodelovanje

- UNEP/INFO TERRA

Novosti GI portala

- Aplikacija za prikazovanje preglednih slojev

Interaktivni kotiček

Odprta diskusija, namenjena izmenjavi izkušenj, mnenj, znanja, ponudbe, povpraševanja, skratka informacij s področja geoinformatike... (več)

Internet

http://www.sigov.si:81/

Conclusion

- In the present time of omnipresent informatization, the building of spatial data infrastructure carries a huge importance for all world countries
- Development of SDI as an networked, distributed enterprise requires new relationships and partnerships among different levels of society and between public and private sector

- In most countries the initiators of SDI setting-up are governments and authorized ministries
- The SDI is not in interest of only those who need spatial data but in interest of a country and the whole society
- The crucial component in the SDI belongs to the Internet Spatial databases, metabases and all necessary services must be found on the Internet where all interested users and spatial data producers have access to

- Considering the SDI, Croatia is in very unenviable position and it is only being considered about the SDI
- Sets of existing spatial data in Croatia should be cataloged and a metabase available on the Internet should be established
- Occurrences in other countries, especially those similar to our own, such as Hungary and Slovenia, should be followed and their positive experience should be of use

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- Information needs will drive further technological developments – creating stringent demands for technology solutions for spatial data capture, integration and representation
 - The emergence of Spatial Business and dynamic synergy of information, technology and access will see a truly Spatial Society

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