SPATIAL DATA INFRASTRUCTURES IN EUROPE

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1. Abstract.
The presentation will consider some recent developments in spatial data infrastructures in Europe. It will be divided into three parts. The first of these examines the changing technological and governmental context that has prompted the recent surge of national spatial data infrastructure initiatives in Europe and elsewhere in the world. Then the experiences of NSDI initiatives in Portugal, Netherlands, Britain and Hungary will be described and evaluated in comparative terms. The final part of the presentation will describe the work that is being currently undertaken by the European Umbrella Organisation for Geographic Information (EUROGI) to facilitate the development and implementation of spatial data infrastructures at the national, regional and global levels.

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National spatial data infrastructures in Europe

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Presentation

- Considers the development of National Spatial Data Infrastructures in Europe
- Three parts
  - The changing context of both technology and government
  - The NSDI phenomenon
  - The role of EUROGI

The changing context

Two main elements:

- Recent developments in geographic information technology
- Their impact on governments

Technology - 1

Recent developments:

- Geographic information systems - potential for integration
- Remote sensing - new forms of digital spatial information
- New data capture tools - GPS, video
- New data presentation tools - multimedia

Technology - 2

Why geographic information is important

- A new wave of technological innovation is allowing us to capture, store, process, and display an unprecedented amount of information about our planet….Much of this information will be 'geo-referenced', that is it will refer to some specific place on the earth's surface.

Al Gore 1998

Technology - 3

Digital data versus maps:

- Unlike maps, strings of geographically referenced data can be aggregated, transformed, and shared. Spatial data can now be easily isolated and abstracted from the particular situation in which it developed and channelled into other settings and other GIS where it can be reused, enhanced, and routed to other potential user communities.

US Mapping Science Committee 1992

Government - 1

- Technological innovation a necessary but not a sufficient condition for take up
- Also need
  - common referencing systems to link data
  - agreed standards to promote interoperability
  - directories to help users find the data they need
- And access to this data

Government - 2

- Shift of emphasis from data producers to data users and from individual products to data integration
- Role of government to promote usage
  - to enable more informed decision making
  - to facilitate more open government
  - to stimulate data services and products

Government - 3

- Governments must view information
  - as an asset which must be managed in the national interest
  - as an infrastructure like roads and schools
- This requires
  - some form of coordination mechanism, and
  - some knowledge of what information is available and where it is located

The NSDI phenomenon

- New approach of governments evident in the emergence of National Spatial Data Infrastructures
  - in both large and small countries
  - in countries with both federal and non federal systems of government
  - in both developed and developing countries
- Now consider the some examples of National Spatial Data infrastructure initiatives in Europe

Four countries

- Portugal SNIG 1990 -
- Netherlands NGII 1992 -
- Britain NGDF 1996 -
- Hungary NSDS 1998 -

The Portuguese SNIG

- SNIG/CNIG created by Law 53/90

  'to coordinate the integration of data at different levels of public administration and thus develop a national system of geographic information'
- Development of regional and local nodes as part of the modernisation of Portuguese government
- SNIG network launched on the Internet in 1995

The Dutch NGII

- RAVI vision published in 1992

  'the proper development of the NII requires a well thought out policy, an adequate administrative organisation, and the intensive coordination of all the involved parties'
- Key role in national initiatives
  - National Clearinghouse project
  - 1:10000 core digital topographic database
  - 1:1000 large scale database for the Netherlands

The British NGDF

- Set up late 1996

  'to enable the unlocking and improvement of geospatial information for the benefit of the citizen, business growth and good government'
- Key drivers
  - knowledge about what information exists
  - access to information
  - integration of information
  - widespread use of information
- Management Board of public and private sector representatives

The Hungarian NSDS

- Set out by the Prime Minister's Office in 1999

  'The strategy document contains 12 strategies and 50 specific tasks to be implemented in the years leading to the planned date of the EU accession'
- Some key elements
  - National Cadastral programme
  - National Topographic programme
  - Multi purpose parcel based information system to support agricultural, environmental and rural development related subsidies

Evaluation - 1

Some similarities

- Coordination mechanisms: CNIG Portugal, RAVI Netherlands, NGDF Board Britain
- Metadata projects: SNIG network Portugal, Clearinghouse Netherlands, Gateway Britain
- Database projects: core data Netherlands, cadastral and topographic data Hungary

Evaluation - 2

- Location
  - within government - Hungary, Portugal
  - outside government - Netherlands, Britain
- Driving forces
  - Portugal - modernising government
  - Netherlands - stakeholder coordination
  - Britain - unlocking information
  - Hungary - preparing for EU accession

European Umbrella Organisation for Geographic Information (EUROGI)

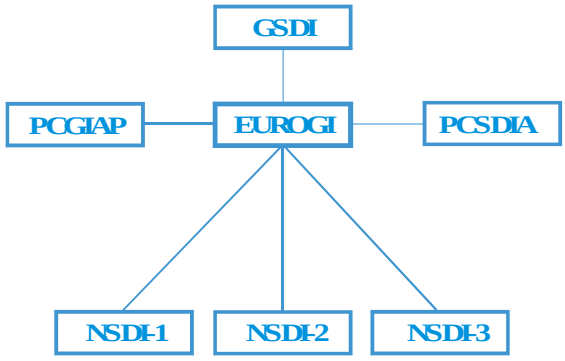
- Represents interests of more than 30 national and European sectoral GI organisations
- Combined membership of more than 2000 public and private sector agencies
- EUROGI set up in 1994
- Secretariat currently based in Appeldoorn in the Netherlands

Strategic objectives

Closely linked to national and European data policy issues

- To encourage the greater use of GI in Europe
- To raise awareness of GI and its associated technologies
- To promote the development of strong national GI associations
- To support the development of a European Geographic Information Infrastructure
- To represent European interests in the Global Spatial Data Infrastructure

EUROGI networks



What EUROGI is doing

- National projects
  - National data policies evaluation
  - GI policy in central and eastern Europe
- European projects
  - EU lobbying activities
  - EGII vision
- Global projects
  - Hosting GSDI6 in 2002

Should every country have a NSDI?

- Every country has the elements of an NSDI already
- Question does it have to be national?
- Answer depends on circumstances
  - Concept relative rather than absolute
  - Reflects distribution of geographic information responsibilities