

Promoting Land Administration and Good Governance by SDI – the European Way


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Promoting Land Administration and Good Governance by SDI – the European Way

Hartmut Müller

5th FIG Regional Conference for Africa
Promoting Land Administration and Good Governance
Accra, Ghana, March 8-11, 2006

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Who are we?


University of Applied Sciences, Mainz, Germany
Institute for Spatial Information and Surveying Technology

Promoting Land Administration and Good Governance by SDI – the European Way

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i3mainz - staff

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INSPIRE
Infrastructure for Spatial Information in Europe

INSPIRE Vision


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Europe

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INSPIRE principles

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- ▶ Data should be collected once and maintained at the level where this can be done most effectively
- ▶ It should be possible to combine seamless spatial information from different sources across Europe and share it between many users and application
- ▶ It should be possible for information collected at one level to be shared between all the different levels, detailed for detailed investigations, general for strategic purposes
- ▶ Geographic information needed for good governance at all levels should be abundant under conditions that do not refrain its extensive use
- ▶ It should be easy to discover which geographic information is available, fits the needs for a particular use and under which conditions it can be acquired and used
- ▶ Geographic data should become easy to understand and interpret because it can be visualised within the appropriate context selected in a user-friendly way

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INSPIRE policy vision

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Harmonised and high quality geographic information should be readily available for

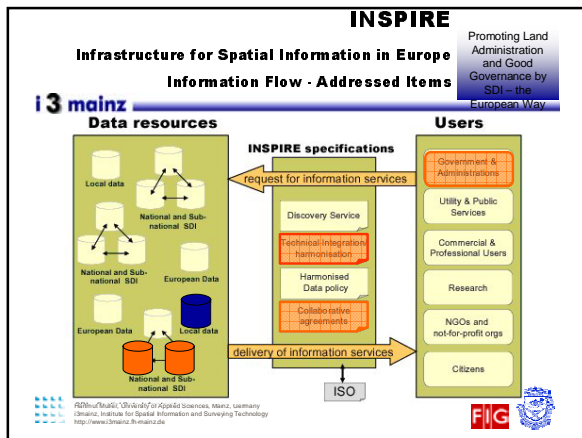
- ▶ formulating, implementing, monitoring and evaluating Community policy and
- ▶ for the citizen to access spatial information, whether local, regional, national or international

Federal Republic of Germany

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1. Federal republic with 16 Länder
2. SDI development at federal, regional and local levels
3. Far reaching autonomy of the Länder: responsibility for their own topographic service, land and property register, environmental and statistical data collection, data policies.
4. Data collection largely decentralised, carried out mostly at regional and local levels (municipalities)
5. processing and maintenance of data adapted to local and regional requirements

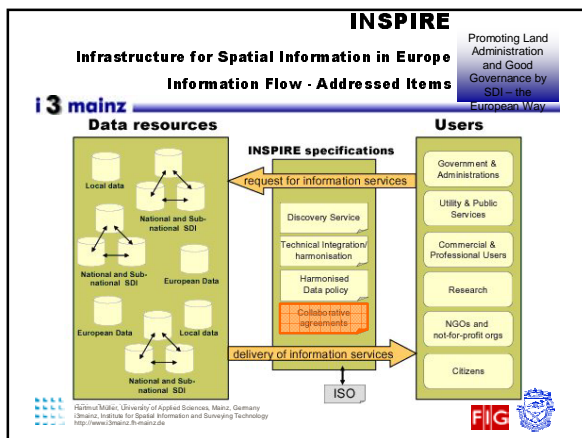


Government & Administration Levels in the FRG

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- National level (Bund)
- Sub-national level (Land) 16 Laender
- Regional level (Landkreis) ~ 250 Rural area districts
- Local level (Gemeinde) ~ 15.000 municipalities



Spatial Basic Data Resources Subnational SDI

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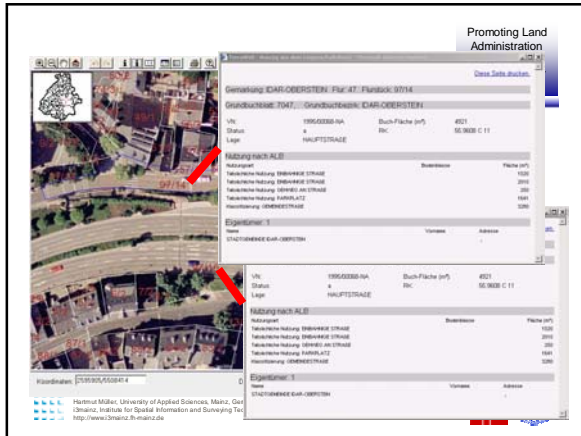
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Data Provided by Surveying authorities

- Digital Landscape Models – DLM
- Digital Topographic Maps – DTK

- Automated Real Estate Register – ALB ownership, land use, etc.
- Automated Real Estate Map – ALK boundaries, buildings, etc.

- Digital Orthophotos –
- Digital Terrain Models – DGM



Implementation of German SDI

Pilot project South Western Part State of Rheinland-Pfalz (one of 16 Länder)

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Regional Level Authority

Subset of Public Service Products

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- **Tourism** support the tourism in the region
- **Building administration** management of the buildings owned by the authority
- **Finances** borrow credits, safeguard credits, financial statistics
- **Roadworks** ensure road safety
- **Transportation** organisation of school buses, public transportation
- **Heavy loads** control the heavy loads using the region
- **Infection prevention** prevent infectious illnesses
- **Land use regulation** control land uses in the region
- **Landscape planning** guarantee feasible development
- **Protection of species** protection of wildlife habitats
- **Drinking water control** secure the drinking water quality
- **Agrarian subsidy** distribute special subsidies for farmers

Rural District Administration

Department Department Department

Responsibility for a specific list of service products

Total of ~ 170 service products

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Goals

Project Study SDI Development

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The project study intends to

- develop a conceptual model for SDI implementation at the regional administration level
- give special credit to the integration of spatial basic data
- guarantee compatibility with ISO and OGC standards
- consider the role of GIS as a part in a work flow environment
- seek for stimulation of GIS application in administration units

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SDI Development

Principal Project Work Plan

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- **System analysis**
 - strategic planning
 - field research and analysis of given situation
 - conceptual modelling
 - user specific concept
 - IT-concept
 - cost-benefit-analyses
- **System acquisition**
 - public tender procedure
 - offer rating
 - functional tests
 - system rating, system recommendation
- **System implementation**
 - system installation, system acceptance
 - data acquisition, data migration
 - system use

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GIS Implementation Project Work Plan

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Tasks

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Questionnaire - General Level of Service Products

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Tasks

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- ▶ What is the purpose of the product?
- ▶ Which data are used ?
- ▶ How is the spatial data reference defined?
- ▶ Which software will be established?
- ▶ Which data formats will be used ?
- ▶ Is a GIS-System / Online-GIS-System already in use?
- ▶ Is it possible to support this product by a GIS-application?
- ▶ Is it possible to use the geo-spatial basic data provided by the Land survey administration?
- ▶ Which other authorities will take part in the results?
- ▶ How many people access the data?
- ▶ Are there any special problems to be addressed?

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GIS Implementation Principal Project Work Plan

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- **System analysis**
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 - **user specific concept** | merged into one step
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Results of conceptual work

Requirement specification document

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Landkreisstag Rheinland-Pfalz

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Contents

General description

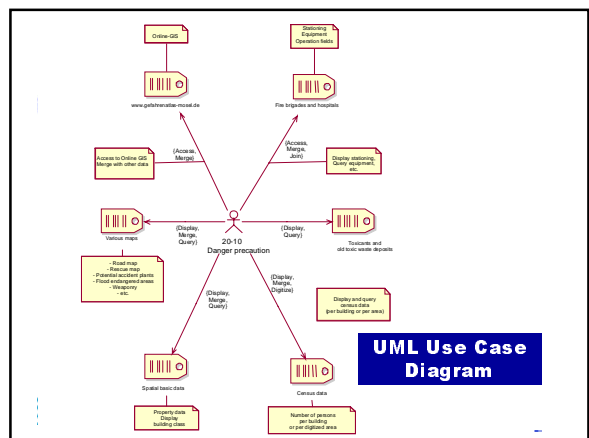
- Current situation
- Goals
- Organisational issues
- Service product oriented budget
- Status Quo of spatial information processing at the pilot administration agency of Berncastel-Wittlich

System requirements

- General conception
- non-functional requirements and general functional requirements
- GIS requirements
- Data management
- General IT requirements

Service product specific requirements

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Use Case 1 Wind Power Plant, Site Selection

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Potential Benefits of GIS Use I Level of Service Products

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Level	Percentage
High	8%
Medium	10%
Low	59%

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- **System analysis**
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 - user specific concept
 - IT-concept
 - cost-benefit-analyses
- **System acquisition**
 - **public tender procedure** | completed
 - **offer rating** | until
 - **functional tests** | until
 - **system rating, system recommendation** | Nov 2005
- **System implementation**
 - **system installation, system acceptance** | currently
 - **data acquisition, data migration** | under work
 - system use

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SDI Development Current work

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- **Improve cooperation with local administration bodies**
 - realize synergy by joint data acquisition (scanning and georeferencing of zoning plans, landscape planning plans, etc.)
- **Develop the meta data acquisition and maintenance strategy**
 - close cooperation with surveying authorities (GDI RLP)
- **Identification of quantifiable external user benefits**
 - citizen, regional and local economy

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Conclusions

How does the project fit with INSPIRE Principles?

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