



The Information Technology of the German Environmental Information Portal PortalU® as Tool for the European Level?

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EnviroInfo 2008
 „WS - Towards an Integrated Information Space for the Environment in Europe“

 Koordinationstabelle
 PortalU

Lueneburg, 10 Sept. 2008


 **Current European Initiatives**


1. SISE: Single (integrated) Information Space and market place for effective Environmental management in Europe
 - GOAL: Development of tools and systems allowing a collaborative Information Space on the Web
 - Enabling technical interoperability

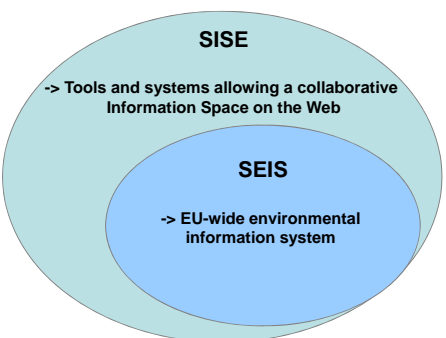
2. SEIS: Shared Environmental Information System
 - GOAL: Establish together with the Member States an integrated and shared EU-wide environmental information system
 - Improving all existing data gathering and information flows related to EU environmental policies and legislation

http://ftp.cordis.europa.eu/pub/ftp7/ict/docs/sustainable-growth/sise-workshop-report-08_en.pdf
http://www.ec-gis.org/Workshops/inspire_2008/presentations/05_02_lucevicene.pdf
<http://ec.europa.eu/environment/seis/what.htm>


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 **SISE & SEIS**



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 **Basic principles of SEIS**


SEIS principles

- Managed close to its source
- Collected only once
- General accessible
- At national level in relevant languages
- Comparisons at different geographical scales
- Use of open source software

-> The fulfilment of legal reporting obligations of public authorities shall be improved.

-> The state of the environment shall be made timely accessible

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PortalU SEIS and PortalU®


Approach to provide a EU-wide environmental information system
 ⇒ scale-up of best-practice system

PortalU®

- the web-enabled German Environmental Information Portal
- joint German federal-state-project
- designed due to increasing demands on the access of environmental information (i.p. EU Directives 2003/4/EG & 2007/2/EG)

Goal: central access to environmental information of public authorities for citizens and experts

Currently more than 200 data providers are involved from federal institutes like the Federal Ministry of Environment or the Federal Environmental Agency to several State organisations of the 16 German federal states (Bundesländer).


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PortalU PortalU®

- Administrative agreement between the federal government and the German federal states
- Boards
 - Executive committee: decision-making body
 - Consortium "AG IUETE": working group for developments of PortalU regarding content and technical aspects
- Coordination Center PortalU
 - Responsibility for the realization of PortalU in respect of content and technique
 - Located in Hannover at the Lower Saxony Ministry of Environment and Climate Protection

The federal-state-cooperation

- Since 1996 for metadata (UDK)
- Since 2003 advanced to all kind of environmental information
- Since Mai 2006 consolidation of the metadata system and the environmental information system -> PortalU®

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PortalU PortalU® and InGrid®

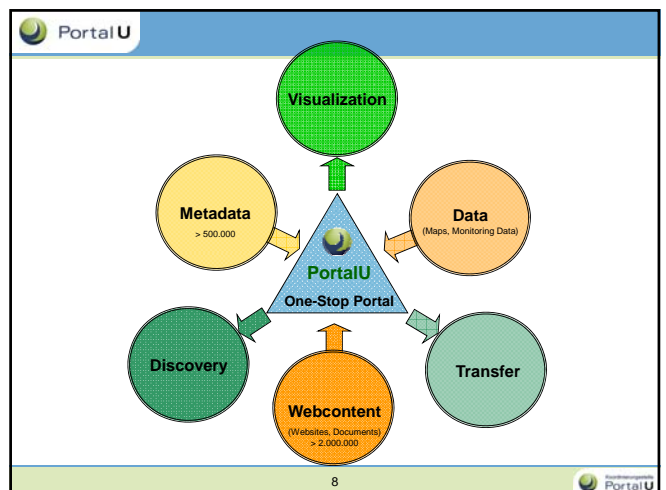
The PortalU® software InGrid®

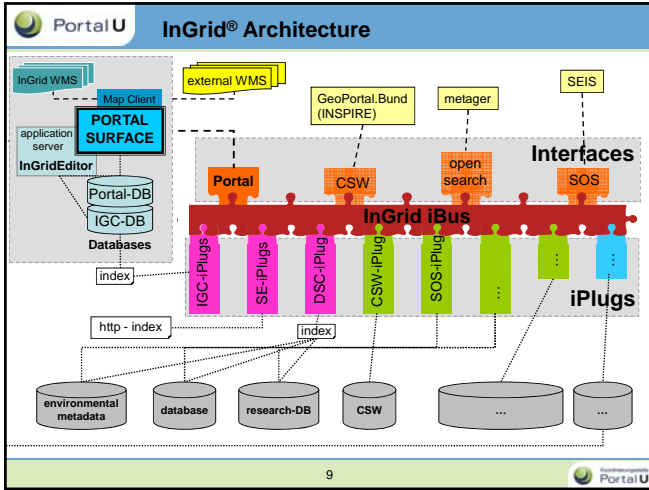
- with the PortalU® technology, InGrid®, all decentralized distributed environmental information can be bundled

websites, databases & data catalogs

- is based on open source technology and proprietary developments
- is ISO, OGC, CEN conform
- different kinds of InGrid-portals can be easily cross-linked

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- InGrid Features**
- Easy access to all environmental information including web pages, databases and data catalogues
 - Queries can be specified by spatially, temporally or semantically restrictions.
 - Further features to improve the understanding of environmental information
 - Spatial data from expert systems can be visualized and combined with other spatial data in a map viewer.
 - Selected environmental information is separately structured in 21 environmental topics.
 - Environmental monitoring data, service pages and an environmental almanac are also available.

SEIS and InGrid

SEIS principles	InGrid - Portal
Managed close to its source	✓
Collected only once	✓
General accessible	✓
At national level in relevant languages	✓
Comparisons at different geographical scales	✓
Use of open source software	✓


⇒ Simplifies fulfilment of legal reporting obligations of public authorities

⇒ The state of the environment is timely accessible

Thanks for your Attention!

Visit us at www.portalu.de

or send a mail to kst@portalu.de

 **Basic principles of SEIS**

Information should be

- managed as close as possible to its source
- collected only once
- accessible to public authorities, citizens and the general public
- available at national level in the relevant national languages

SEIS should enable public authorities to


- fulfil their legal reporting obligations easily
- assess in a timely fashion the state of the environment and the effectiveness of their policies and design new policy


SEIS should enable public authorities & citizens to

- make comparisons at appropriate geographical scale and participate meaningfully in the development and implementation of environmental policy

Information sharing and processing should be supported through common, free open source software tools.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0046:FIN:EN:PDF>

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 **Basic principled of SEIS**


Information should be:

- managed as close as possible to its source;
- collected once, and shared with others for many purposes;
- readily available to public authorities and enable them to easily fulfil their legal reporting obligations;
- readily accessible to end-users, primarily public authorities at all levels from local to European, to enable them to assess in a timely fashion the state of the environment and the effectiveness of their policies, and to design new policy;
- accessible to enable end-users, both public authorities and citizens, to make comparisons at the appropriate geographical scale and to participate meaningfully in the development and implementation of environmental policy;
- fully available to the general public, after due consideration of the appropriate level of aggregation and subject to appropriate confidentiality constraints, and at national level in the relevant national language(s);

• And information sharing and processing should be supported through common, free open source software tools.

Commission proposal: Communication on the SEIS (1.2.2008)
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0046:FIN:EN:PDF>

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 **About SISE**


SISE: the Single (integrated) Information Space and market place for effective Environmental management in Europe


- Tools and systems allowing a collaborative "Information Space" on the Web
 - Requires a transparent backend system of systems
 - More than measurements and data exchange
 - Allowing ad hoc, on demand service chaining

Goal: enabling technical interoperability

- Initiative of ICT for Sustainable Growth Unit of the EC-Information Society and Media Directorate-General
- Build on results from FP6 and forthcoming FP7 projects which will produce semantically enhanced services.
- Management of complexity and the requirements of the environmental legislation in Europe has to be considered

(Report of the Expert Consultation Workshop, Brussels, 15.2.2008)
http://ftp.cordis.europa.eu/pub/fp7/ict/docs/sustainable-growth/sise-workshop-report-08_en.pdf
 (Presentation at the INSPIRE Conference 2008 from Dr. Juzeviciene)
http://www.ec-gis.org/Workshops/inspire_2008/presentations/05_02_juzeviciene.pdf


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 **About SEIS**

SEIS: Shared environmental information system

GOAL: establish together with the Member States an integrated and shared EU-wide environmental information system

- Initiative of the European Commission and the European Environment Agency
- Aime: improving all existing data gathering and information flows related to EU environmental policies and legislation


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Portal U Application of InGrid® on European level

InGrid® can be adjusted on different public administration level from European down to municipal level.

Necessary adjustments for the European level

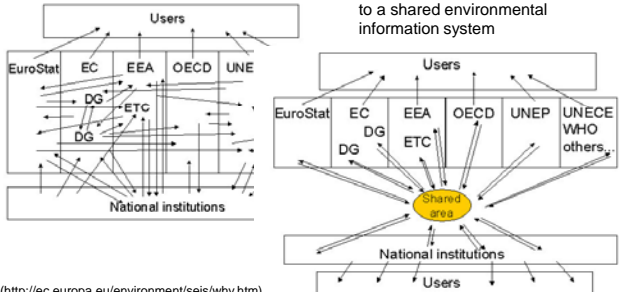
- Thesaurus: currently bilingual environmental thesaurus
 ⇒ will be replaced in next InGrid® version by multilingual GEMET
- Layout: image data, configuration data, content of drop down lists
- Spatial references: currently only for Germany (German semantic network service)
 - can be switched off or
 - replaced by a European semantic network service
- Multilingualism: currently bilingual mechanism

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Portal U The idea of SEIS


SEIS:

From the current fragmented reporting system



to a shared environmental information system

(<http://ec.europa.eu/environment/seis/why.htm>)

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Portal U InGrid® Architecture - Hilfsfolie


iBus:

- central component of the software InGrid
- receives and processes search queries over different interfaces
- transfers search queries to iPlugs
- bundles search results

iPlugs: generic adapters to connect data sources and iBus


IDC-DB: InGrid Data Catalog – Data Base, metadata storage
 Portal-DB: management of intern information -> user administration

Portal surface with integrated WMS, WMS-Viewer and metadata recording module (MD-EK)

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Portal U Main Components of InGrid®

- a flexible configurable internet portal
- a powerful search engine
- the metadata catalogue MDEK
- a standard OGC web mapping service (WMS)
- a visualization component for maps
- Several query interfaces for research in connected systems and for the transfer of search results

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Portal U Our organization: The Coordination Center PortalU

Type of Organisation:


- The Coordination-Center PortalU represents a **cooperation of federal and state environment agencies in Germany**
- PortalU® is the central online-information portal for environmental information in Germany

Specialized in:

- Environmental **information management, metadata management**
- Implementation of EU-Directives **2003/4/EC** ("Aarhus Directive") and **INSPIRE**

Inhouse-capacity:

- Long-term cooperation of providers of public-sector (environmental) **data**
- Technical experts** (metadata management systems, GIS, internet portals)
- Administrative experts** (EU legislation "Aarhus-Directive", INSPIRE)
- Advanced information-broker and portal-**software (InGrid®)**

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Portal U Potential Interest and Potential Contribution

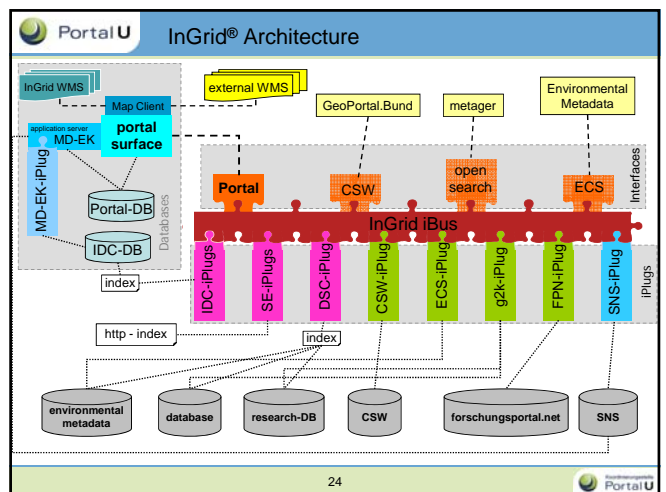
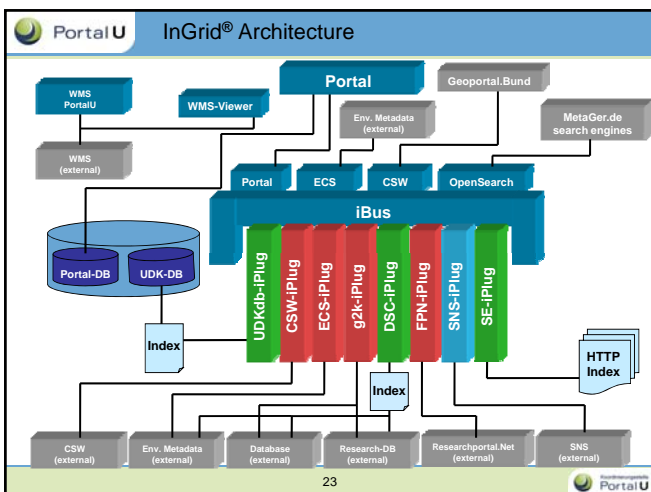
Our interests:

- Participate** in building a Single Information Space for the Environment in Europe
- Contribute** our expertise and technology
- Improve** our technical tools


Potential contributions:

- Best practice example** for environmental information management
- Established **access to distributed environmental information** across state borders and sectors
- Proven **organizational structure**
- Successful **adoption of standards, open architectures**
- Support of **INSPIRE**, „Aarhus-Directive“


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Portal U ... on all levels of the hierarchy




Federal Level


Portal U 

State Level

State Environmental Portal  State Data Catalog  State Geoportal 

Municipality Level

Municipal Environmental Portals 

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