

PortalU – A New Nationwide Portal to Environmental Information in Germany

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Introduction: Since May 2006, PortalU (<http://www.portalu.de>), the new national internet portal for environmental information in Germany, is online. PortalU is the latest in a series of digital information systems that have been set up by the environmental administration in Germany to improve public access to environmental information (Bilo 2000, Kruse 2003, Vögele 2003). One of the driving forces behind these efforts is the EU-directive 2004/3/EC on public access to environmental information (KOM 2003). This directive requires government institutions on all levels of the administrative hierarchy to make almost all existing environmental information freely accessible to the public. Only in a few cases is it possible to reject an information request issued by a European citizen. The directive explicitly points to the Internet as a means to implement the necessary measures and implies a pro-active implementation strategy: To avoid being flooded by information requests, at least the most important information and data should be made available “actively”, i.e. online, in a user-friendly, systematic and understandable way.

Most government agencies in Germany do have informative and well-designed web-sites. However, due to the complex structure of the administration, to find information about a specific environmental topic is still not easy. Before they can scan the available thematic information, information-seekers often have to answer a number of questions: Which agency is responsible for this topic? Is it a federal, a state or a municipal agency? Where on the web-site of the responsible agency do I find information about my specific problem? Who within the agency can assist me and provide further information and access to the actual data? To provide one central national focal point for environmental inquiries is the task of PortalU. The portal offers a common framework for all government-owned environmental information in Germany. Under one central internet address, PortalU offers access to environmental information held by public authorities on different levels of the administrative hierarchy¹. Following the definitions given in the EU-Directive, environmental information in PortalU is not limited to “classic” topics like “waste”, “water”, or “natural protection”. It also includes environmentally relevant information related to, among others, human health and cultural heritage. Likewise, the “public authorities” that participate in PortalU are not only government agencies, but are also private firms that have public responsibilities and functions.

PortalU and the INSPIRE Directive: Although the development of PortalU was primarily targeted towards the implementation of EU-Directive 2003/4/EC, the relevance of the infrastructure for the upcoming INSPIRE initiative is evident: Most of the environmental information covered by PortalU has some sort of relation to

¹ As of 2006, participation in PortalU is limited to public authorities on the federal and state levels. Regional authorities will be included at a later stage.

geographic space, and a considerable part of it can be classified as “geospatial” in a more narrow sense. The close interrelation between environmental and geospatial information is documented in the three annexes of the proposed INSPIRE directive. Most of the INSPIRE topics not related directly to reference data are covered by PortalU.

PortalU taps into geospatial data resources nationwide and on different levels of the administrative hierarchy. Considerable efforts were needed to build the supporting technical and organisational infrastructure. Given the large overlap between environmental information accessible through PortalU and the thematic geospatial data defined in the INSPIRE annexes, PortalU is predestined to become an important player in Germany’s implementation of the INSPIRE directive.

On a technical level, the PortalU software was equipped with a number of features that will support contribution to a national spatial data infrastructure (Klenke, 2006):

- **ISO-compatible data catalog:** The data catalog integrated in PortalU uses a metadata schema that is compatible with the ISO’s international standards for the description of geospatial data (Swoboda 1999, Karschnik 2003). Through active observation of the INSPIRE process and participation in the development of the INSPIRE implementing rules, the institutions behind PortalU ensure the future compatibility of the PortalU metadata schema with the INSPIRE directive.
- **Standardized catalog interface:** Build-in interfaces based on the specifications issued by the Open Geospatial Consortium (OGC) ensure that the PortalU and the built-in data catalog can communicate with other catalogs and search clients (OGC 2004). PortalU will be connected as a data source to the information portal of the German spatial data infrastructure, GeoPortal.bund (<http://geoportal.bkg.bund.de/>), and may be linked directly into a European INSPIRE infrastructure in the future. On the other hand, PortalU may function as a portal to other OGC-compatible data catalogs in such an infrastructure. Through PortalU, users may then have access to geospatial reference data that are relevant for specific environmentally motivated tasks.
- **Geoportal functionality:** PortalU features a built-in map-viewer to visualize and query geospatial data sets. Web mapping services that are described in the data catalog and found through the PortalU search function may be selected and displayed directly in the PortalU map-viewer client. The client also provides access to attribute data associated with the digital maps. As it is possible to overlay several web mapping services, customized and task-driven digital maps can be created.
- **Spatial reference of all content:** In the PortalU expert search mode, spatial queries can be specified either through the map-viewer client, or by entering an appropriate geographic identifier. In both cases, a bounding box is created and used to spatially condition the search query. If a spatial identifier is entered, the bounding box is determined with the help of the Semantic Network Services

(SNS, Bandholtz 2003). SNS is web-service provided by the German Federal Environment Agency (UBA) in Dessau. It consists of an environmental thesaurus and a geothsaurus (which is very similar to a gazetteer) that covers the area of Germany. SNS is also used to determine the spatial context of web-pages and other unstructured text. Based on this function, spatial searches in PortalU do not only cover “true” geospatial data sets (i.e., digital maps, plans etc.), but also content like reports, legal texts, and other documents with an indirect reference to geographic space.

Summary and Conclusions: PortalU was developed primarily to help the environmental administration in Germany implement the EU-Directive 2003/4/EC on public access to environmental information. The portal offers a nationwide one-stop access to environmental information distributed over different levels of the administrative hierarchy. Because there is an extensive thematic overlap in the data covered by directive 2003/4/EC and the proposed INSPIRE Directive, PortalU will also play an important role for the implementation of the latter. For one, it provides the organizational infrastructure needed to publish geospatial thematic data as requested by INSPIRE. In addition, the technical features of PortalU make it possible to integrate the portal in INSPIRE-type infrastructures.

Literature

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