

### Dear Reader,

In the recent years, we have seen substantial progress for European initiatives like INSPIRE, GMES, and SEIS with the common goal of establishing spatial data infrastructures to enhance access and usability of environmental data for strategic decision making. With this development, the need for support in data harmonization becomes more and more important. With the 2nd Newsletter of the HUMBOLDT project, we provide you with a report on the current status of project's developments, as well as on ongoing activities and upcoming events.

Enjoy reading and please do not hesitate to give us your feedback!

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➤ [Learn more about HUMBOLDT by visiting our Web site.](#)

### The HUMBOLDT project in brief

The four-year EU project HUMBOLDT contributes to the implementation of a European Spatial Data Infrastructure (ESDI) that integrates the diversity of spatial data available for a multitude of European organizations. It is the aim of this project to manage and advance important parts of the implementation process of this ESDI.

The main goal of the HUMBOLDT project is to enable organizations to document, publish and harmonize their spatial information. The software tools and processes created will demonstrate the feasibility and advantages of an Infrastructure for Spatial Information in Europe as planned by the INSPIRE initiative, meeting the goals of Global Monitoring for Environment and Security (GMES).

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## Project News

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### Open Source Decision

One of the most important aspects of the HUMBOLDT project is to prepare the ground for a self-sustaining continued development of HUMBOLDT project results, especially with respect to the software and services that are being created. A comprehensive review of different distribution strategies soon revealed that for HUMBOLDT an open source method was to be considered the best solution for the software distribution strategy. If you desire further information on this subject, the complete [Report on Software distribution strategies and business models](#) is available for download at the HUMBOLDT Web site. Another important analysis that facilitated the decision-making process was the "[Inventory and analysis of OSS business models](#)" report of our partner project CASCADOSS.

The HUMBOLDT Business Group, with partners from industry and research was established for the strategic planning on the long-term approach for the exploitation of the HUMBOLDT software. Based on the work of this group, the decision was made to apply the GNU Lesser General Public License version 3 (LGPL v3) to the HUMBOLDT framework software components at the consortium meeting in September 2008. Furthermore, a time plan was agreed, which centers around the release of the HUMBOLDT Framework M1 on March 31st 2009.

### Going Public –Milestone 1

On March 31st 2009 the first components of the HUMBOLDT framework will be published. They will be available for free download at the [HUMBOLDT project Web site](#). This release includes the following software components (at different levels of maturity):

- The HUMBOLDT Model Editor, a UML editor that is specifically geared towards the creation of UML application schemas;
- The HUMBOLDT Alignment Editor, a tool that supports the definition of conceptual schema transformations;
- The Mediator Service, a proxy service that executes transformation chains to provide harmonized geodata;
- The Workflow Service, a service that analyses data sets and decides which processing is required to match a target product description;
- The Context Service, a simple service that can be used to define the transformation target product;
- Several transformation services exposed as OGC Web Processing Services, such as Coordinate Transformation Service and Edge Matching Service.

Detailed documentation for all these services and applications, such as full specifications, will be made available under the same license as the software itself. Furthermore, a forum, wiki and bugtracker will be made available.

With this first major step towards the creation of an Open Source Community the HUMBOLDT consortium invites developers to test the design and expandability of the framework. Suggestions and contributions are highly welcome.

In February 2009 the development process for the second version of the HUMBOLDT framework will be initiated. This milestone of the HUMBOLDT framework will be published in October 2009.

### Achievements Work Package 3

Major milestones of the past months were the establishment of the second report on the State of the art in user groups and needs and the third version of the Handbook of Standards.

The HUMBOLDT project emphasized from the beginning, that existing GIS and SDI solutions should be re-used wherever possible to guarantee higher stability, better quality and higher acceptance in the GEO community. Therefore, the identification of possibilities on how to integrate the technologies investigated was an important goal besides summarizing the state of

the art in software architectures, concepts and methodologies. The state of the art analysis brought valuable insights on how to evaluate the suitability of existing spatial data tools and standards for HUMBOLDT. The main conclusions and findings of this analysis are summarized in the Handbook of Standards. This document contains a classification of standards, tools and architectures, which determines their suitability and future application in the Humboldt framework and scenarios. The [Handbook of Standards](#) is available on the HUMBOLDT Web site.

## Achievements Work Package 2

Data harmonization is a costly and lengthy process that needs a lot of time and effort to develop and evolve. One important problem when implementing an SDI is that the costs of the investments usually do not occur within the same organizations that are having the major benefits of it. Therefore, the main objectives of the Cost Analysis and Analysis of cost reduction potentials report of WP2 were the identification of costly and lengthy procedures in current data management. These are the procedure with a big improvement potential by HUMBOLDT tools, for which internal and external benefits are likely to occur as a result of improved data harmonization procedures.

An important finding of this report is the insight that that the implementation of data harmonisation processes cannot be seen merely from an isolated investment perspective. There are many other important factors of limitation in existing IT infrastructures in general and SDIs in particular. Among them, insufficient data quality, organizational and policy problems as well as lack of knowledge and experiences are problematic aspects which have were identified to be of importance with regard to SDI development.

## HUMBOLDT Scenario Mid-term call

The development of [scenarios](#) is an essential element of the HUMBOLDT project in which the different HUMBOLDT components are applied and tested under realistic conditions. These scenarios are based on applications in different GMES-related use cases. The scenarios are both a test bed and a community-driven research environment, which assist in the development and promotion of the project's objectives.

The Midterm Scenario Call was a strategic instrument to extend and strengthen the existing HUMBOLDT scenarios with respect to the overall HUMBOLDT objectives. This instrument aimed to achieve a high actuality and high flexibility within the project, to strengthen the co-operation with other existing initiatives and to maximize the use of HUMBOLDT results in different areas of application.

The HUMBOLDT consortium received four different scenario proposals. Three of them were accepted and went through an analytic process before being adopted in the HUMBOLDT implementation plan. These three scenarios are Urban Modelling, Transboundary Catchment, and Protected Areas II.

## HUMBOLDT Consortium Meeting September 2008

From the 2nd to 5th September 2008 a HUMBOLDT consortium meeting took place in Budapest, under the auspices of the HUMBOLDT project partner FÖMI (Institute of Geodesy, Cartography and Remote Sensing of Hungary). Besides the decision on the Open Source license, further important results of this meeting were the adoption of the first version of the Detailed Implementation Plan for the coming two years, and a presentation of the results of two working groups established after the Lisbon meeting. These two working groups were the Conceptual Schema Translation Working Group, which presented a very detailed analysis of what a conceptual schema translation engine would have to be able to do, and the Fast Track Scenario Protected Areas, which presented a demo showcasing the application of HUMBOLDT Framework components to the Protected Areas scenario.

Another important part of the Budapest meeting was the annual Advisory & Review Board Meeting.

## Upcoming HUMBOLDT Events

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### Winter of Code Workshop

From the 23rd of February to the 27th of February 2009, the first HUMBOLDT Winter of Code is taking place in Bad Herrenalb, in the northernmost part of the Black Forest in Germany. In this secluded setting, more than 15 developers from the HUMBOLDT consortium work on five implementation projects. The goal of this intensive implementation week is to further improve the existing Milestone 1 developments for the release as Open Source by the end of March, and to kick off the development work of Milestone 2 of the HUMBOLDT Framework. Furthermore, this week will foster knowledge exchange between the developers, ease the integration of new developers into the project, and help in establishing new teams for the development work on the M2 components.

### HUMBOLDT Consortium Meeting

The next HUMBOLDT consortium meeting is scheduled for the 3rd to 6th of March 2009 in Milano, Italy. The consortium meetings serve as communication and collaboration platform for all issues related to the HUMBOLDT project. For this meeting, several WP meetings are scheduled as well as a number of cross-disciplinary working group meetings. Further, the plenary sessions will give an overview on the overall progress of the project, the current status of each workpackage, and they will help to identify and discuss the interdependencies and timelines of the various developments within the project. This time, the focus of the HUMBOLDT meeting will be on the scenario work. The development of demonstrators will be of major importance in the upcoming project year, since through them, the necessary feedback will be provided to the developers of the HUMBOLDT framework to progress the implementation according to the users' needs.

Additionally, two training sessions are foreseen. The first training is directed towards the Scenario partners and deals with methods and tools to support an application-driven development process. The other training will present the background on Semantic Interoperability and Ontologies to

foster the discussion on this topic within the consortium.

The subsequent HUMBOLDT consortium meeting will take place in September 2009.

### **AGILE 2009 Pre-Conference Workshop “Challenges in Geospatial Data Harmonisation”, 2<sup>nd</sup> of June 2009, Hannover, Germany**

This workshop will bring together researchers from different communities to investigate current strategies and discuss future research collaborations in the wider context of data harmonisation. Further, the idea of the workshop is to learn about ongoing activities in research projects that provide successful test cases for enabling geospatial data harmonisation. The call for papers is published on the following website:

<http://www.esdi-humboldt.eu/events/agile2009.html>

The deadline for paper submission is April 17th 2009.

### **INSPIRE Conference 2009 Workshop “HUMBOLDT Data Harmonisation Tools in Action”, 15<sup>th</sup> June 2009, Rotterdam, The Netherlands**

The INSPIRE Directive has entered implementation phase and solutions for data harmonisation are needed. In this workshop, partners of the European project HUMBOLDT will share their experiences in designing and developing processes and an open source software framework including tools for different steps in the data harmonisation process. These will be demonstrated using examples of data harmonisation issues that were encountered in the different cross-border and multilingual HUMBOLDT application scenarios as well as during the testing of INSPIRE data specifications.

The workshop participants will learn about potential solutions to data harmonisation issues and will get a chance to see them in action. They will also get to know ways to participate in the further development of HUMBOLDT, e.g. by joining the HUMBOLDT Developer Community or the HUMBOLDT User Community.

## Imprint

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