

International Symposium Towards Digital Earth - 3D Spatial Data Infrastructures

September 7-8 2011

Internationales Wissenschaftsforum Heidelberg (IWH)
University of Heidelberg

The International Hengstberger Symposium - *Towards Digital Earth - 3D Spatial Data Infrastructures* - has a clear interdisciplinary character and is aiming at bringing together young scientists and experienced experts in the research areas of

- (i) **volunteered geographic information (VGI)** and
- (ii) **remote sensing** with particular focus on the third dimension (3D).

Symposium Objectives

Three-dimensional (3D) mapping and characterization of the Earth using sensor technology is increasingly gaining importance. Detailed 3D topographic information is essential in a great variety of research fields aiming at mapping, modeling, exploiting and increasing the understanding of phenomena located on the Earth surface, such as for modeling natural hazards and environmental change monitoring. New **remote sensors** allow highly detailed 3D topographic mapping with sub-meter accuracy such as the Laser Scanning technology.

In contrast to these high quality but costly sensor data, the last years have witnessed a compelling advent of collaborative Web 2.0 projects (e.g. wikis and social networks) collecting freely available user-generated geographic content such as the OpenStreetMap (OSM). Each contributor in these communities represents a "**human sensor**" in a world-wide network adding new geographic observations. Therefore, it is essential to integrate aspects from engineering and natural science (sensor technology) with Human and Social aspects of Web communities.

This interdisciplinary symposium aims at **identifying possibilities and limitations of combining the best of both worlds by fusing 3D remote and (2D) human sensor data**. Furthermore, new research impulses for the extension of 3D Spatial Data Infrastructures (3D-SDIs) and next steps towards the 3D Digital Earth "by and for people" are expected.

Symposium Program

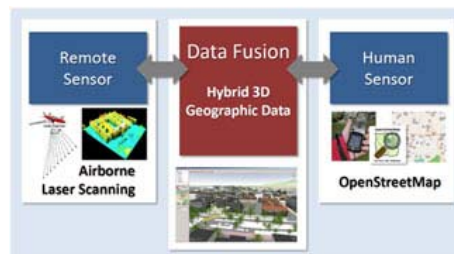
The Hengstberger Symposium will have an innovative character with extensive space for interdisciplinary knowledge exchange and scientific discussion.

Wednesday, 7 September 2011 (9-18h)
3D (VGI) Digital Earth and SDIs: State-of-the-Art

Morning: Official opening; 3D remote sensors; (3D) VGI
Afternoon: 3D-SDIs; Case studies and applications
Evening: Symposium Dinner (Old Town of Heidelberg)

Thursday, 8 September 2011 (8:30-15h)
Beyond the Current 3D Digital Earth: Possibilities and Limitations

Morning: Sensor data fusion; Plenary discussion
Afternoon: Future collaborative research activities; Closing



Fusion of remote and human sensor data resulting in a new hybrid 3D geographic data source exemplified by using OSM and ALS data.

Contact

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Venue

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