



GEOSTREAM

Exploiting User-Generated Geospatial Content Streams

The Internet has evolved to the primary medium for people to network and communicate, but also to publish and exchange any kind of information. GeoWeb 2.0, the geographic embodiment of Web 2.0, describes the next generation of geospatial information publishing, discovery and use on the Web. The vision of GeoWeb 2.0 is to take advantage of the inherent temporal and geospatial context and to provide additional value for the exploitation of geospatial information shared over the Web.

In this context, GEOSTREAM investigates innovative concepts for geospatial content streams. The aim of the project is to increase the value of already existing user-generated content streams by making implicit geospatial aspects visible and usable, and by increasing their quality.

GEOSTREAM is a two-year research project partially supported by the FP7 – Research for SMEs (small and medium sized enterprises) programme of the European Commission under contract number 315631. It is carried out by six international partners from research and

industry working closely together. The project was launched in April 2013 and will end in March 2015.

Objectives

GEOSTREAM aims at providing novel techniques and tools for extracting, processing, and exploiting user-generated geospatial information on the Web. In technical terms, the focus will be on the following objectives:

- smart data **mining and fusion** mechanisms for user-generated geo-content
- tools that support the user in the **authoring** of data with geospatial aspects
- means to **publish** content and provide related **services** (web and mobile applications)

Overall, GEOSTREAM will provide the participating SMEs with the tools to be able to turn the oncoming geospatial data tsunami into a compelling business advantage. The results will be a user-generated geospatial content compiler, a Web computing platform, a rich authoring tool and a live mobile computing platform.



Geospatial Data Mining and Fusion

Through exploiting user-contributed geospatial data it is possible to produce high-quality geospatial datasets. Approaches for spatial data mining that derive point, line and area features from user-generated geospatial content clouds are developed. Furthermore, the compiled data will be integrated with existing data sources that are already used by the SMEs.



Rich Data Authoring

To assist the user in creating new data, novel tools for authoring rich user-generated geospatial content are developed. The tools will provide easy-to-use means for integrating geospatial information with content such as text, images, and videos. The objective is to integrate map interfaces with word processing capabilities.

Content Stream Exploitation

The integration of the content collection, fusion, authoring, and provisioning technologies into a unified application and service framework will provide new ways to exploit user-generated geospatial content. Examples include advanced location-based and other spatio-temporal information services, like live tour guides, but also services and applications for geospatial business intelligence.



<http://geocontentstream.eu>



The Institute for the Management of Information Systems (IMIS) of the **Research Center ATHENA** conducts research in the areas of data management and large scale information systems. The Geoinformatics department focuses especially on geospatial and spatio-temporal data management.

The Database and Information Systems Group at **Freie Universität Berlin** is working on application-oriented as well as fundamental research projects. Currently the group focuses on data management in mobile systems on the one hand and unstructured-to-structured data area on the other.

Fraunhofer FOKUS develops solutions for the communication infrastructure of the future. Besides technical infrastructures, Fraunhofer FOKUS creates manifold practical concepts, applications and prototypes.

Michael Mueller Verlag (MMV) was founded as a publishing house for alternative, practical travel guides. Currently, 150 guides are offered covering Europe almost completely. MMV has become the market leader for specialized travel publications.

Talent S.A. develops and markets innovative software products and services through the exploitation of state-of-the-art technologies in various sectors of economic and technological interest including geospatial and location-aware applications.

WIGeoGIS is one of the leading European enterprises in the ranges of geo-marketing and internet/mobile GIS with more than 300 customers at 3 enterprise locations.



Plaka Map: Research Center ATHENA
Other images: Fraunhofer FOKUS