The GeoKnow Project
Linking Geospatial Data (London, 5th - 6th March 2014)

Claus Stadler

Collaborative Project 2012-2015
Information and Communication Technologies
Project No. 318159
Start Date 01/12/2012

2014-03-05
The Spatial Data Web

Status

- Semantic technologies for exposing, sharing, and connecting pieces of data on web using RDF
- Large Spatial Databases (OpenStreetMaps, Google Maps etc.) and GIS systems required for many applications

Goal

- Enhance the Web as a global, distributed platform for data, information and knowledge integration by combining GIS and semantic technologies
Consortium

7 partners, 4.5 mio budget, December 2012 - December 2015
GeoKnow Generator Interface & API

Use Case Specific Applications
access components via API

GeoKnow
Project Overview

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Achievements - Linked Data Stack

Linked Data Lifecycle

- **Interlinking / Fusing**
- **Classification / Enrichment**
- **Quality Analysis**
- **Evolution / Repair**
- **Extraction**
- **Search / Browsing / Exploration**
- **Storage / Querying**
- **Manual revision / Authoring**

*Tools and Technologies*
- OntoWiki (RDF Editor)
- Virtuoso (Triple Store)
- Sparqlify (RDB2RDF Converter)
- TripleGeo (Shape2RDF Converter)
- LIMES (Link Discovery)
- GeoLift (Modular Enrichment Pipeline)
- DL-Learner (Schema Enrichment)
- Databugger (Structural QA Analysis via SPARQL)
- ORE (Knowledge Base Repair)
- Facete (Faceted Browser)
- Mappify (App Generator)
- GeoLift (Modular Enrichment Pipeline)
- DL-Learner (Schema Enrichment)
Linked Data Stack (http://stack.linkeddata.org) provides a consolidated repository of Debian packages of these tools

Re-usable by other Linked Data Projects
Common interface and integration of geospatial Linked Data Stack tools
DropYa and TruckYa

- Continental is publishing information about POIs “next to the road“ on mobile devices focussing on different user groups,
  - Motorway service areas (incl. fitness center, restaurant, toilet, hostel)
  - Sights: information about museums, playgrounds, famous people birthplaces

<table>
<thead>
<tr>
<th>Selection of (Geospatial) RDF-Graphs</th>
<th>Facetted Filtering, Extraction of related RDF-Ressources using Facete</th>
<th>Refinement, Transformation, Editorial Process</th>
<th>Visualization in Dropya</th>
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<tbody>
<tr>
<td><a href="https://dbpedia.org">DBpedia</a></td>
<td><img src="image1.png" alt="Facetted Filtering" /></td>
<td><img src="image2.png" alt="Refinement" /></td>
<td><img src="image3.png" alt="Visualization" /></td>
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<td><a href="https://freebase.com">Freebase</a></td>
<td><img src="image4.png" alt="Extraction of related RDF-Ressources using Facete" /></td>
<td><img src="image5.png" alt="Transformation, Editorial Process" /></td>
<td><img src="image6.png" alt="Visualization in Dropya" /></td>
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<td><a href="https://geonames.org">GeoNames</a></td>
<td><img src="image7.png" alt="Facetted Filtering" /></td>
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The End

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Upcoming Event: European Data Forum 2014, Athens, March 19-21

Thanks for your attention!
Datasets:
- LinkedGeoData - OpenStreetMap RDF Conversion
- DBpedia - Wikipedia RDF Conversion
- INSPIRE data will be converted to RDF (second project year), in particular Greece E-Government Data
- E-Commerce and Supply Chain Management Datasets
- (partially WikiMapia data)

Standards and Interoperability:
- RDF, OWL (W3C)
- GeoSPARQL (OGC)
- INSPIRE
- R2RML and SML

Sustainability: LinkedGeoData, DBpedia, geodata.gov.gr will be maintained after the project