



Aalto University
School of Science



Finnish Ontology Service of Historical Places and Maps: hipla.fi

18th October, 2017

Esko Ikkala, Jouni Tuominen, Eero Hyvönen
Semantic Computing Research Group (SeCo), <http://seco.cs.aalto.fi>
Department of Computer Science, Aalto University
firstname.lastname@aalto.fi

The problem of place name ambiguity

- **Geographical information in web pages, databases and unstructured text is often expressed by means of place names**
- **Problems with place names**
 - one place → many different names
 - one name → many places
 - places change in time » E.g. regional and other changes of Helsinki
 - names change in time » E.g. place names of the Karelian region
- **Difficult or impossible to**
 - index document collections by location
 - perform geographic information retrieval accurately
- **Need unique identifiers for places**

hipla.fi: replace place names with unique IDs

Autocomplete text search with multiple data sources:

Search places [Maps](#)

Finnish municipalities (1939-44)

Joensuu, Kuopion lääni

Karelian map names (1922-44)

Joensuu (Man-made feature, Kuolemajärvi)

Joensuu (Man-made feature, Rautu)

Joensuu (Man-made feature, Valkjärvi)

Joensuu (Man-made feature)

Joensuu (Man-made feature, Antrea)

Finnish Geographic Names (contemp.)

Joensuu (Talo, Salo)

Joensuu (Talo, Sipoo)

Joensuu (Talo, Salo)

Joensuu (Vakaveden osa, Salo)

Joensuu (Talo, Salo)

Finnish Spatio-Temporal Ontology (SAPO)

Joensuu(1848-1921) [coordinates missing]

Joensuu(1922-1953)

Joensuu(1954-2004)

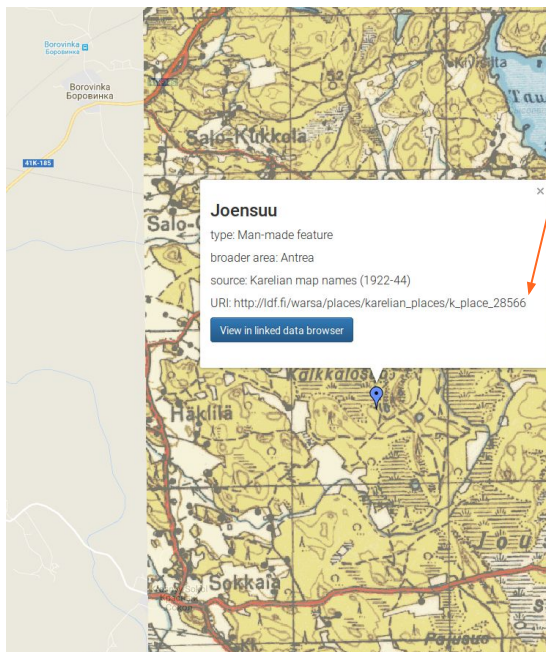
Joensuu(2005-2008)

Joensuu(2009-)

Getty TGN

Joensuu (inhabited places, Pohjois-Karjala, Suomi, ... World)

Disambiguate search results on modern and historical maps:



Suggest missing places:

Place name

Alternative name

Description

Municipality

Broader area

Place type

Comment

Suggestor

Coordinates (click on the map)

Target dataset

More information

- **Proof of concept online:**
 - hipla.fi
- **Search widget for developers:**
 - <https://github.com/SemanticComputing/federated-sparql-search-widget>
- **Open source map georectifier:**
 - <http://mapwarper.onki.fi/>
- **Project and publications:**
 - <http://seco.cs.aalto.fi/projects/histoplaces/en/>

