

Retrieving Wikipedia Pages of Topologically Related Administrative Divisions via Linked Data

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A Motivating Example

Search for Neighboring Entities

Example canton	http://dbpedia.org/resource/Canton_of_St._Gallen	copy
Example district	http://dbpedia.org/resource/Zurich_District	copy
Example municipality	http://dbpedia.org/resource/Geneva	copy
Entity	<input type="text" value="Dietlikon"/> ▼	clear

<http://dbpedia.org/resource/Dietlikon>

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Entity	<input type="text" value="http://dbpedia.org/resource/Dietlikon"/> ▼	clear

A Motivating Example

Result

i Result: 5 entities

↓ Download DBpedia

Results Wiki ⌵

- <http://en.wikipedia.org/wiki/Bassersdorf>
- <http://en.wikipedia.org/wiki/Dübendorf>
- <http://en.wikipedia.org/wiki/Kloten>
- <http://en.wikipedia.org/wiki/Wallisellen>
- <http://en.wikipedia.org/wiki/Wangen-Brüttisellen>

A Motivating Example

Bassersdorf

From Wikipedia, the free encyclopedia

Coordinates: 47°27′N 8°38′E﻿ / ﻿47.45°N 8.63°E﻿ / 47.45; 8.63

Bassersdorf is a municipality in the Swiss canton of Zürich, located in the district of Bülach, and belongs to the Glatt Valley (German: *Glattal*).

Contents [hide]

- History
- Geography
- Demographics
- Economy
- Transportation
- Twin towns – Sister cities
- Gallery
- Sources
- External links

History [edit]

The name, mentioned in 1155 as *Bazzelstorf* and maybe yet in the early 11th century as *Basselstorf*,^[3] is a compound consisting of *dorf*, a widespread constituent in alemannic placenames meaning ‚hamlet, farm, village, estate‘, and the genitive form of an anthroponym, probably OHG **Bazzilo* (or its feminine *Bacila*, documented in the *Abbey of St. Gall*).^[4] The Alemannic settlement dates to the 8th or 9th century. Due to its position halfway between the towns of Zürich and Winterthur, the village gained some importance as a relay during the 18th and 19th centuries.

Under the Helvetic Republic (1798–1803), it was the district capital.

In 2001, *Crossair Flight 3597* crashed into the ground at Bassersdorf while on approach to land at Zürich Airport. Twenty-four of the thirty-three people on board were killed.^[5] The investigation concluded that the accident was a controlled flight into terrain (CFIT) caused by a series of pilot errors and navigation mistakes that led the plane off-course. This course deviation caused the plane to crash into a hilltop, 4.05 km (2.52 mi) short of and 150 m (490 ft) north of its assigned landing strip, runway 28.^[6]

Geography [edit]

Bassersdorf has an area of 9 square kilometers (3.5 sq mi). Of this area, 42.5% is used for agricultural purposes, while 30.8% is forested. Of the rest of the land, 26.3% is settled (buildings or roads) and the remainder (0.3%) is non-productive (rivers, glaciers or mountains).^[7]

The municipality is located on the edge of the mid-Glatt Valley. Since 1931, the village of Battenswil has been part of the municipality.

Demographics [edit]

Bassersdorf has a population (as of 31 December 2013) of 11,318.^[1] As of 2007, 21.2% of the population was made up of foreign nationals. Over the last 10 years the population has grown at a rate of 50.5%. Most of the population (as of 2000) speaks German (85.8%), with Italian being second most common (3.8%) and Serbo-Croatian being third (1.7%).

In the 2007 election the most popular party was the SVP which received 37.2% of the vote. The next three most popular parties were the SPS (19.6%), the FDP (12.4%) and the CSP (10.3%).

The age distribution of the population (as of 2000) is children and teenagers (0–19 years old) make up 23.4% of the population, while adults (20–64 years old) make up 65.2% and seniors (over 64 years old) make up 11.4%. In Bassersdorf about 75.5% of the population (between age 25-64) have completed either non-mandatory upper secondary education or additional higher education (either university or a *Fachhochschule*).^[7] The historical population is given in the following table:^[3]

<div><div><div><div><div><div></div><div><div>Bassersdorf</div></div></div></div><div></div></div></div></div>	
 <div>Aerial view of Bassersdorf</div>	
<div><div><div><div><div></div><div><div>Country</div></div></div></div>Switzerland</div></div>	

Canton

Zürich

District

Bülach

Coordinates

47°27′N 8°38′E﻿ / ﻿47.45°N 8.63°E﻿ / 47.45; 8.63



The Same For Contained Entities


Search for Neighboring Entities

Search for Contained Entities

Example country	<input type="text" value="http://dbpedia.org/resource/Switzerland"/>	<input type="button" value="copy"/>
Example canton	<input type="text" value="http://dbpedia.org/resource/Canton_of_Zurich"/>	<input type="button" value="copy"/>
Example district	<input type="text" value="http://dbpedia.org/resource/Zurich_District"/>	<input type="button" value="copy"/>
Entity	<input type="text" value="http://dbpedia.org/resource/Zurich_District"/> <input type="button" value="v"/>	<input type="button" value="clear"/>
<input type="button" value="Search"/>		

Search for Parent Entities

Result

 Result: 1 entities

<input type="button" value="Download DBpedia"/>	<input type="button" value="Results Wiki v"/> <input type="text" value="http://en.wikipedia.org/wiki/Zurich"/>
---	---



The Same For Parent Entities

▸ Search for Neighboring Entities

▸ Search for Contained Entities

▾ Search for Parent Entities

Example municipality	http://dbpedia.org/resource/Zurich	copy
Example district	http://dbpedia.org/resource/Zurich_District	copy
Example canton	http://dbpedia.org/resource/Canton_of_Zurich	copy
Entity	<input type="text" value="http://dbpedia.org/resource/Dietlikon"/>	clear

Search

Result

i Result: 1 entities

↓ Download DBpedia	Results Wiki ⚡ <input type="text"/> http://en.wikipedia.org/wiki/Bülach_District
------------------------------------	--



Option I: Querying DBpedia SPARQL Endpoint

```
PREFIX dbpedia: <http://dbpedia.org/resource/>
SELECT DISTINCT ?doc
WHERE {
    ?ent dbpedia-owl:neighboringMunicipality dbpedia:Dietlikon .
    ?ent foaf:isPrimaryTopicOf ?doc .
}
ORDER BY ?doc
```

cantons: NUTS 3

districts: LAU 1

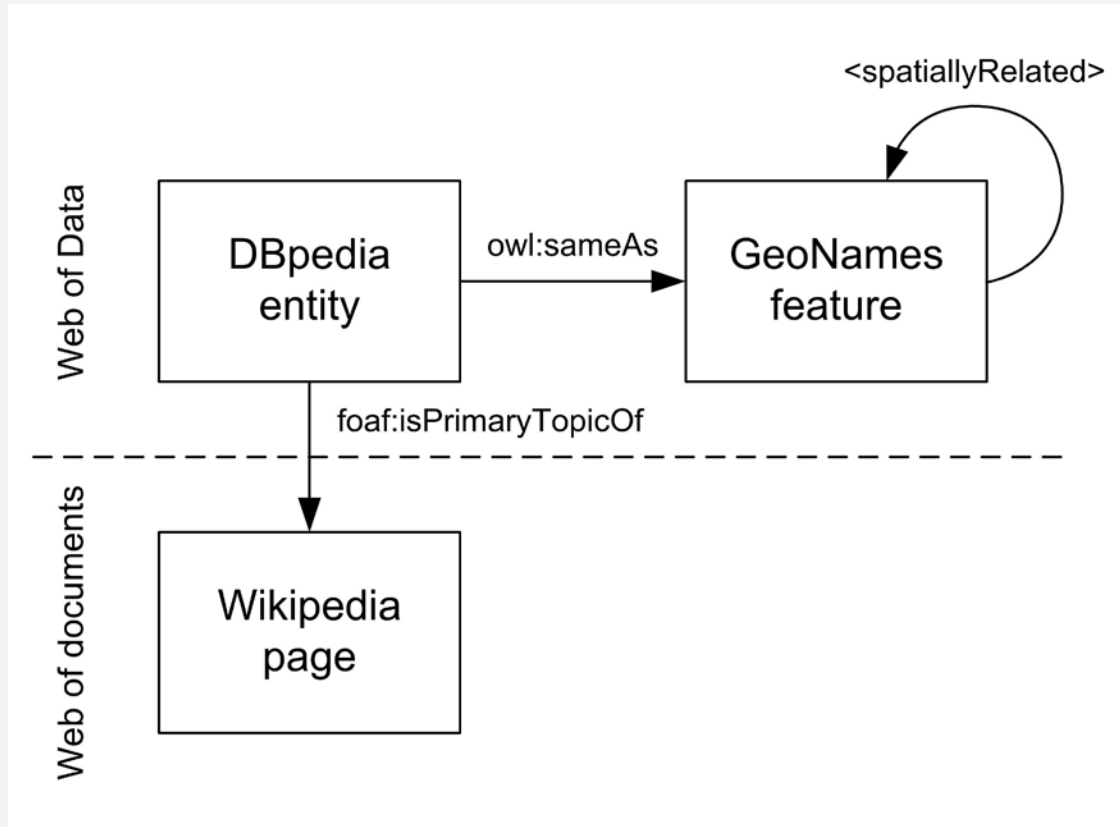
municipalities: LAU 2



Option I: Querying DBpedia SPARQL Endpoint

- ✓ Construction of queries is straightforward
- ✗ DBpedia graph data model misses properties for
 - neighbouring cantons
 - neighboring districts
 - contained districts/parent cantons
 - contained cantons/parent country

Option II: Querying DBpedia via GeoNames



Option II: Querying DBpedia via GeoNames

- ✓ GeoNames provides containment and neighborhood relations for all administrative divisions of Switzerland
- ✗ DBpedia's (3.9) GeoNames links are (very) noisy!
 - For Switzerland, two third of the `owl:sameAs` links do not point to an administrative division of the same order

Option III: Querying DBpedia via GeoNames Using Manually Curated Links

- ❖ cf. demonstrator, it supports
 - searches for **neighboring** cantons, districts, municipalities
 - searches for **districts in cantons**, **municipalities in districts**
 - searches for **parents** of cantons, districts, municipalities
 - **dereferencing** results to the corr. Wikipedia pages
 - **download** of the result sets
 - **upload** of DBpedia-GeoNames links
- ❖ URI: <http://webdnl.wsl.ch/locswbapp/index.xhtml>

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