
OpenStreetMap and Wikidata: Awesome Together

State of the Map 2019

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Edward Betts (OSM: Edward)

CHAPTER 1

What is Wikidata?

Wikidata is a CC0-licensed structured knowledge base under the Wikimedia umbrella that contains over 60 million items.



Wikidata Search Wikidata

(Q151510)

English

Heidelberg University

public research university in Heidelberg, Baden-Württemberg, Germany

Ruprecht-Karls-Universität Heidelberg | University of Heidelberg

Statements

instance of

- public research university

1 reference

retrieved 16 March 2019

campus

0 references

students count

- 30,787

point in time 1 December 2016

1 reference

reference URL https://de.wikipedia.org/wiki/Liste_der_Hochschulen_in_Deutschland

<https://www.uni-heidelberg.de/mnd/studium/download/studierendenstatistik-ws201617.pdf>

retrieved 28 September 2017

5 December 2017

28,413

point in time 1 June 2017

1 reference

reference URL <https://www.uni-heidelberg.de/md/zentral/studium/studierendenstatistik-ss2017v4.pdf>

retrieved 5 December 2017

part of

- Alliance 4EU+

0 references

logo image

Logo University of Heidelberg.svg

1,727 × 1,700; 795 KB

1 reference

imported from Wikimedia project [Turkish Wikipedia](#)

language used

- German

1 reference

imported from Wikimedia project [Turkish Wikipedia](#)

- English

0 references

subsidiary

- Heidelberg Graduate School of

-
- # Wikidata was intended to solve two things:
- The mess of interwiki links in the Wikipedias
 - The duplication of data in Wikipedia infoboxes

(Q151510)

English

Heidelberg University

public research university in Heidelberg, Baden-Württemberg, Germany

Ruprecht-Karls-Universität Heidelberg | University of Heidelberg

Statements

instance of	students count
⌚ public research university	⌚ 30,787
1 reference	point in time 1 December 2016
retrieved 16 March 2019	1 reference
⌚ campus	reference URL https://de.wikipedia.org/wiki/Liste_der_Hochschulen_in_Deutschland
0 references	https://www.uni-heidelberg.de/mnd/studium/download/studierendenstatistik-ws201617.pdf
part of	retrieved 28 September 2017
⌚ Alliance 4EU+	5 December 2017
0 references	⌚ 28,413
logo image	point in time 1 June 2017
	1 reference
Logo University of Heidelberg.svg	reference URL https://www.uni-heidelberg.de/md/zentral/studium/studierendenstatistik-ss2017v4.pdf
	retrieved 5 December 2017
language used	
⌚ German	
1 reference	
imported from Wikimedia project Turkish Wikipedia	
⌚ English	
0 references	
subsidiary	
⌚ Heidelberg Graduate School of	

Now, all interwiki link data is stored in Wikidata (with some exceptions)...

Sitelinks

Wikipedia (108 entries)

- afwiki Heidelberg, Duitsland
- alswiki Heidelberg
- amwiki Հեյդելբերգ
- arwiki هايدلبرغ
- astwiki Heidelberg
- azbwiki هايدلبرق
- azwiki Heydelberq
- barwiki Heidlebaag
- be_x_oldwiki Гайдэльбэрт
- bewiki Гайдэльберг
- bgwiki Хайделберг
- brwiki Heidelberg
- bswiki Heidelberg
- cawiki Heidelberg
- cebwiki Heidelberg
- cs wiki Heidelberg
- daWiki Heidelberg
- deWiki Heidelberg
- elwiki Ηαϊδελμπέργκ
- enwiki Heidelberg
- eswiki Heidelberg
- etwiki Heidelberg
- fiwiki Heidelberg
- frwiki Heidelberg
- glwiki Heidelberg
- hewiki היידלברג
- hiwiki हायॅडल्बर्ग
- hrwiki Heidelberg
- itwiki Heidelberg
- iwwiki היידלברג
- liwiki Heidelberg
- lmowiki Heidelberg
- ltwiki Heidelbergas
- lvwiki Heidelberga
- mgwiki Heidelberg
- mkwiki Хајделберг
- mrwiki हायेडल्बर्ग
- mswiki Heidelberg
- ndswiki Heidelburg
- nlwiki Heidelberg (Duitsland)
- nnwiki Heidelberg
- nowiki Heidelberg
- nywiki Heidelberg

Buch von oben ausgesehen. Das Buch ist in einer Reihe von anderen Büchern aufgestellt. Die Titel der anderen Bücher sind teilweise sichtbar.

Als PDF herunterladen | Drucken

In anderen Sprachen

العربية Cebano English Español Bahasa Indonesia Русский اردو Winaray 中文

98 weitere Links bearbeiten

Neckar vor dem Ausfluss aus dem Odenwald in einem länglich, flussaufwärts sich zuspielenden Talsohle, umgrenzt von Königstuhl (568 m) und Gaisberg (375 m). Der Neckar fließt hier von Ost nach West. Am rechten Neckarufer erhebt sich der Heiligenberg (445 m). Der Neckar mündet etwa 22 Kilometer nordwestlich, gemessen vom Ende der Talsohle, in Mannheim in den Rhein. Die im 20. Jahrhundert eingemeindeten Orte reichen über das Neckartal in die Bergstraße hinein, die am Rand des Odenwalds entlangführt. Die Stadt liegt in der Metropolregion Rhein-Neckar, einem 2,35 Millionen Einwohner zählenden Verdichtungsraum, der neben Teilen Südhessens und der rheinland-pfälzischen Vorderpfalz in Baden-Württemberg die beiden Stadtkreise Mannheim und Heidelberg sowie die westlichen und südlichen Gemeinden des Rhein-Neckar-Kreises umfasst.

Stadtverwaltung: 69117 Heidelberg

Website: www.heidelberg.de

Oberbürgermeister: Eckart Würzner (parteilos)

Lage der Stadt Heidelberg in Baden-Württemberg



Flächenaufteilung [Bearbeiten | Quelltext bearbeiten]

Kategorie	Fläche (ha)	Anteil (%)
Gesamtfläche	10884 ha	100,0%
Waldfläche	4424 ha	40,6 %
Landwirtschaftsfläche	2869 ha	26,3 %
Wasserfläche	253 ha	2,3 %

...and Wikipedia infoboxes can populate themselves from Wikidata.

La ciutat està situada, parcialment, al final de l'anella de ferrocarril del riu Neckar, que divideix la ciutat en dues meitats i transcorre d'est a oest per anar a desembocar al Rin uns 22 km més endavant, passada la ciutat veïna de Mannheim.

Al final d'aquesta vall hi trobem els turons que envolten el barri antic: el Königstuhl (568 m), el més alt, i el Gaisberg (375 m).

Barris

Heidelberg té 15 barris i 47 districtes municipals diferents. Alguns d'ells eren antics pobles veïns que, fins a l'any 1975, va anar absorbint la ciutat.

El barri antic

També anomenada "ciutat vella" per analogia amb el terme alemany corresponent, **Altstadt**. És el nucli històric de la ciutat i és on es troben la major part de les zones d'interès turístic. Està situat a la banda sud del Neckar, en l'estreta franja plana que hi ha entre la llera del riu i el turó del Königstuhl.

En aquest barri hi trobem el castell de Heidelberg (*Heidelberger Schloß*), el pont vell (*Alte Brücke*), les esglésies com la Heiliggeistkirche i la Jesuitenkirche, l'antiga presó dels estudiants (*Studentenkzr*) o les places com ara la Karlsplatz, el Kornmarkt, la Marktplatz o la Universitätsplatz.

És al llarg de tot el barri antic que, durant les quatre setmanes d'avent, s'hi instal·la el mercat de Nadal (*Weihnachtsmarkt*).

A l'extrem oest de l'Altstadt hi ha la plaça Bismarckplatz, que és el punt central del transport públic local i marca el final del barri.

Localització	
	Wikimedia © OpenStreetMap
49° 24' 44" N, 8° 42' 36" E	
Estat	Alemanya
Estat federat	Baden-Württemberg
Regió administrativa	Karlsruhe
Capital de	Electorat del Palatinat
Població	
Total	160.601 (2017)
• Densitat	1.474,89 hab/km ²
Geografia	
Part de	Àrea metropolitana Rin-Neckar, Karlsruhe i Q1496439
Superficie	108,89 km ²
Banyat per	Neckar
Altitud	114 m
Limita amb	Mannheim
Història i celebracions	
Esdeveniment clau	Siege of Heidelberg



Wikidata probably has the largest collection of linked IDs to other third-party databases, data sets, and knowledge bases.

Identifiers

German municipality key

[8 08221000](#)

1 reference

imported from Wikimedia project [English Wikipedia](#)

GND ID

[4023996-2](#)

1 reference

imported from Wikimedia project [German Wikipedia](#)

VIAF ID

[144258029](#)

1 reference

imported from Wikimedia project [German Wikipedia](#)

Library of Congress authority ID

[n81096075](#)

1 reference

imported from Wikimedia project [German Wikipedia](#)

DMOZ ID

[Regional/Europe/Germany/States
/Baden-Württemberg/Locality
s/Heidelberg/](#)

0 references

MusicBrainz area ID

[eee2e250-e74b-4216-896d-
ec1980ea123c](#)

1 reference

stated in [MusicBrainz](#)

National Diet Library Auth ID

[00000000](#)

US National Archives Identifier

[10044743](#)

0 references

German district key

[8 08221](#)

0 references

EMLO location ID

[9c3a2db5-866f-4132-9279-86f04bc5de5e](#)

0 references

Encyclopædia Universalis ID

[heidelberg](#)

0 references

DDB ID

[MQESL2XUAHY2FEVOAN7T3MFB7ITEIA](#)

[UR](#)

1 reference

imported from Wikimedia project [German Wikipedia](#)

Encyclopædia Britannica Online ID

[place/Heidelberg](#)

0 references

archINFORM location ID

[145](#)

1 reference

reference URL https://www.archinform.net/service/wd_aiort.php

stated in archINFORM

Wikidata has grown outside its original purpose and is fast becoming a central data hub especially for GLAM institutions (galleries, libraries, archives, and museums).



Everything

Search Loc.gov



The Library of Congress > Linked Data Service > LC Name Authority File (LCNAF)

Heidelberg (Germany)

URI(s)

- <http://id.loc.gov/authorities/names/n81096075>

Instance Of

- MADS/RDF Geographic
- MADS/RDF Authority
- SKOS Concept ↗

Scheme Membership(s)

- Library of Congress Name Authority File

Collection Membership(s)

- Names Collection - Authorized Headings
- LC Names Collection - General Collection

Variants

- Geïdel'berg (Germany)

Additional Information

- <http://id.loc.gov/rwo/agents/n81096075>

Closely Matching Concepts from Other Schemes

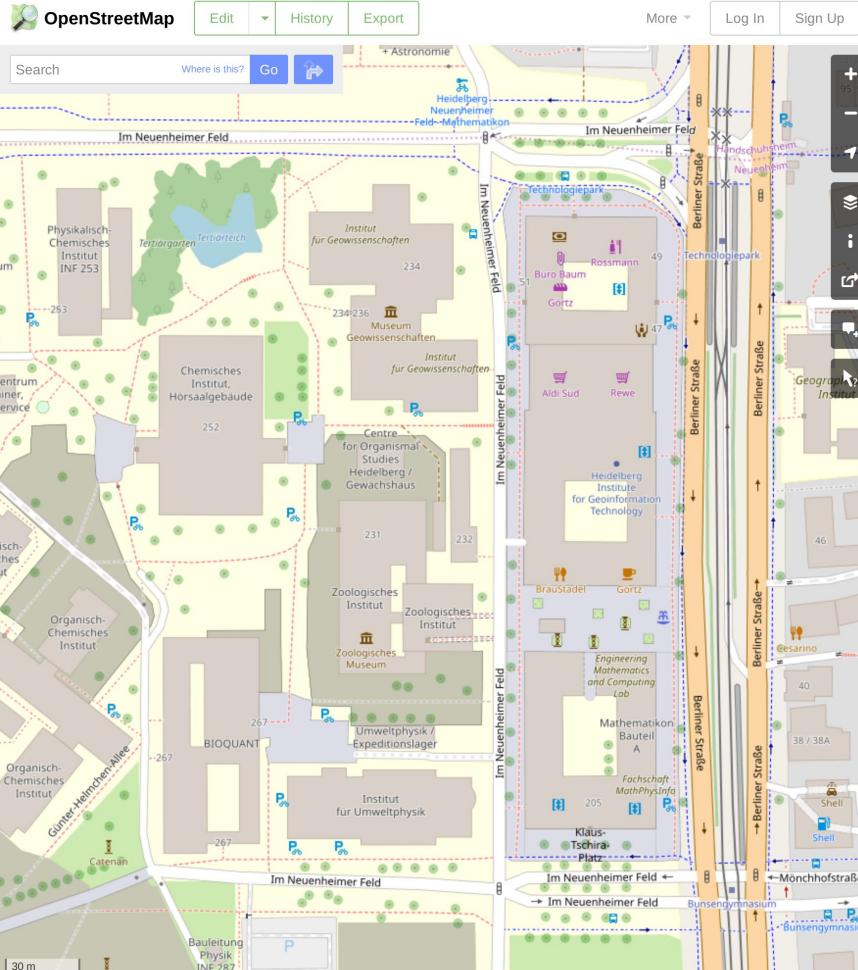
- ↳ [Geïdel'berg \(Germany\) -- Heidelberg](#) ↗
- ↳ [Germany -- Heidelberg Region](#) ↗
- ↳ [Heidelberg](#) ↗ ⓘ Label from public data source Wikidata

Sources

- found: Heidelberg, die Nekarstadt ... 1951.
- found: Osip Mandel'shtam v Geïdel'berge, 1994.

Wikidata data model

OpenStreetMap has nodes,
ways, relations, tags,
keys,
values, roles, etc.



Wikidata has items, statements, properties, values, qualifiers, etc.

(Q151510) ☆

English

Heidelberg University

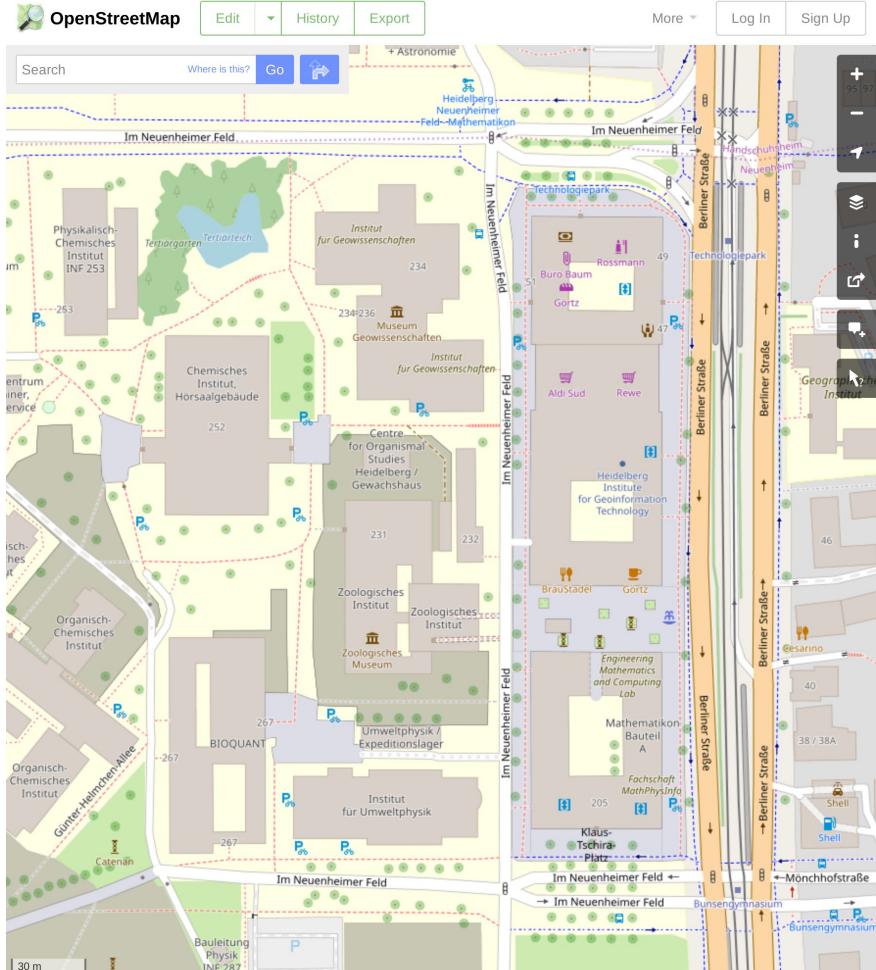
public research university in Heidelberg, Baden-Württemberg, Germany
Ruprecht-Karls-Universität Heidelberg | University of Heidelberg

Statements

instance of	students count
⌚ public research university	⌚ 30,787
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reference URL https://de.wikipedia.org/wiki/Liste_der_Hochschulen_in_Deutschland	reference URL https://www.uni-heidelberg.de/nd/studium/download/studierendenstatistik-ws201617.pdf
campus	retrieved 28 September 2017
0 references	5 December 2017
part of	⌚ 28,413
⌚ Alliance 4EU+	point in time 1 June 2017
0 references	1 reference
logo image	reference URL https://www.uni-heidelberg.de/md/zentral/studium/studierendenstatistik-ss2017v4.pdf
	retrieved 5 December 2017
Logo University of Heidelberg.svg	language used
1,727 × 1,700; 795 KB	⌚ German
1 reference	1 reference
imported from Wikimedia project Turkish Wikipedia	imported from Wikimedia project Turkish Wikipedia
English	⌚ English
0 references	0 references
subsidiary	⌚ Heidelberg Graduate School of
imported from Wikimedia project Romanian Wikipedia	imported from Wikimedia project Romanian Wikipedia

Data modeling discussions
on the [Wikidata:Project chat](#)
page are actually quite
similar to discussions on
OSM's [tagging](#) mailing list.

*(Both projects struggle with ontology
issues because both projects are
examples of folksonomies.)*



Wikidata data is stored as a bunch of **triples**. The most basic triples in Wikidata are called ***statements***.

This design is heavily based on W3C's Resource Description Framework [RDF].

triple

=

subject

+

predicate

+

object

Triples, subjects,
predicates, and objects are
represented as IRIs.

Earth has the IRI:

<http://www.wikidata.org/entity/Q2>

Or Q2 for short.

Wikidata triple

=

Earth (Q2)

+

instance of (P31)

+

inner planet (Q3504248)

Triples *themselves* can be subjects of secondary triples, allowing us to *qualify* and add sourcing info. These secondary triples are called *qualifiers* and *references*, respectively.

Heidelberg (Q2966)

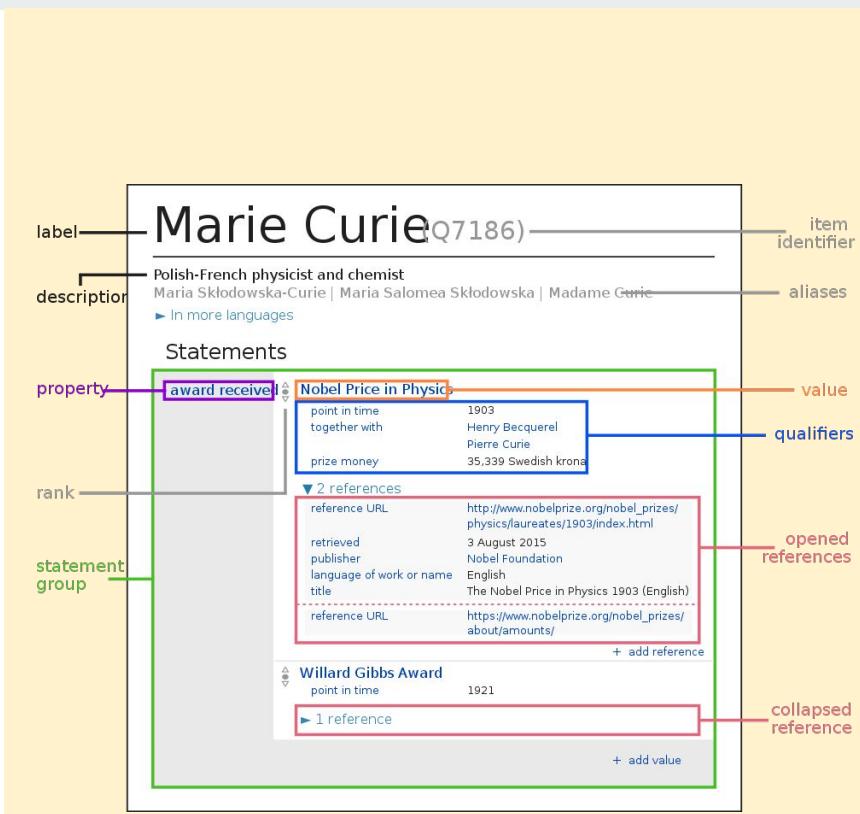
population (P1082)

150,335

point in time (P585)

2012-12-31

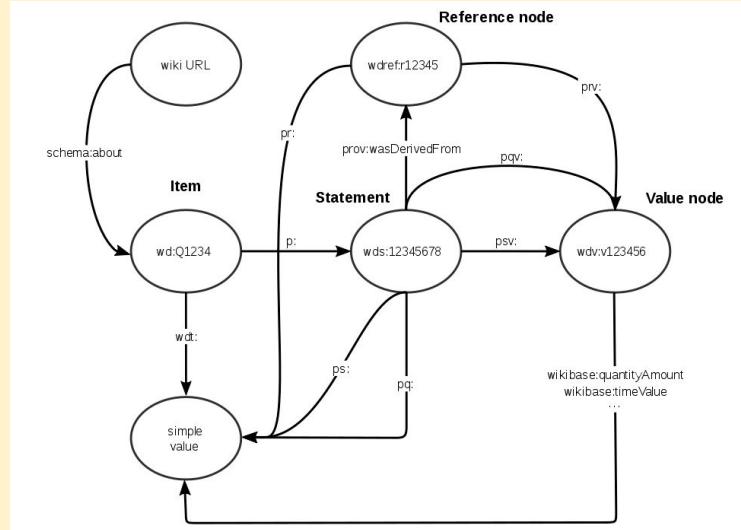
Shown here are how various triples, subjects, predicates, and objects related to Curie are represented in Wikidata, and the common terms Wikidatans use to refer to them depending on context.



Advanced: This is a more complete RDF data model for the main Wikidata space.

Useful when you need to fully understand the model or craft advanced queries.

https://www.mediawiki.org/wiki/Wikibase/Indexing/RDF_Dump_Format



Aside: Wikidata also has lexemes (L-namespace) for lexicographic data, structured data for Wikimedia Commons (SDC) (M-namespace), and shape expressions (E-namespace).

to go (L23773)

English verb

Forms go, goes, went, gone

[\[expand\]](#) (4 forms, 6 statements)

Senses

[S1] to move through space

[\[expand\]](#) (3 statements)

[S2] to work or function (properly); to move or perform as required

[\[expand\]](#) (2 statements)

Statements

Etymology

gon

[\[edit\]](#)

stated in
edition

Oxford Etymological Lexicon
3rd

Wikidata Query Service

The Wikidata Query Service (WDQS) is the official API for querying data from Wikidata.

Think: Overpass API/Turbo
for Wikidata.

<https://query.wikidata.org>

The screenshot shows the Wikidata Query Service interface. At the top, there are navigation links for 'Examples', 'Help', 'More tools', and language selection ('English'). Below the header is a code editor containing a SPARQL query. A large blue play button icon is positioned below the code editor. To the right of the play button is a 'Bubble chart' visualization showing the results of the query. At the bottom, there is a table displaying the results in a tabular format with columns: 'city', 'cityLabel', 'mayor', and 'mayorLabel'. The results are ordered by population and limited to 10 entries.

Wikidata Query Service Examples Help More tools English

```
1 #Largest cities with female mayor
2 #added before 2016-10
3 #TEMPLATE={"template":"Largest ?c with ?sex head of government","variables":{"?sex"
4 SELECT DISTINCT ?city ?cityLabel ?mayor ?mayorLabel
5 WHERE
6 {
7   BIND(wd:Q6581072 AS ?sex)
8   BIND(wd:Q515 AS ?c)
9
10  ?city wdt:P31/wdt:P279* ?c . # find instances of subclasses of city
11  ?city p:P6 ?statement .           # with a P6 (head of government) statement
12  ?statement ps:P6 ?mayor .        # ... that has the value ?mayor
13  ?mayor wdt:P21 ?sex .           # ... where the ?mayor has P21 (sex or gender) female
14  FILTER NOT EXISTS { ?statement pq:P582 ?x } # ... but the statement has no P582
15
16  # Now select the population value of the ?city
17  # (wdt: properties use only statements of "preferred" rank if any, usually mean
18  ?city wdt:P1082 ?population .
19  # Optionally, find English labels for city and mayor:
20  SERVICE wikibase:label {
21    bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .
22  }
23 }
24 ORDER BY DESC(?population)
25 LIMIT 10
```

Bubble chart 10 results in 2637 ms Code Download L

city	cityLabel	mayor	mayorLabel
wd:Q1490	Tokyo	wd:Q261703	Yuriko Koike
wd:Q1489	Mexico City	wd:Q5771800	Claudia Sheinbaum
wd:Q8646	Hong Kong	wd:Q19217	Carrie Lam
wd:Q1530	Baghdad	wd:Q19367467	Zekra Alwach
wd:Q11462	Surabaya	wd:Q12522317	Tri Rismaharini
wd:Q38283	Yokohama	wd:Q529363	Eumiko Hayashi

WDQS uses W3C's SPARQL as the query language.

<https://www.w3.org/TR/sparql11-query/>

https://www.wikidata.org/wiki/Wikidata:SPARQL_tutorial

The screenshot shows the Wikidata Query Service interface. At the top, there are navigation links for 'Examples', 'Help', 'More tools', and a language selector set to English. Below the header is a sidebar with various icons for editing and managing queries. The main area contains a SPARQL query:

```
1 #Largest cities with female mayor
2 #added before 2016-10
3 #TEMPLATE={"template":"Largest ?c with ?sex head of government","variables":{"?sex"
4 SELECT DISTINCT ?city ?cityLabel ?mayor ?mayorLabel
5 WHERE
6 {
7   BIND(wd:Q6581072 AS ?sex)
8   BIND(wd:Q515 AS ?c)
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10  ?city wdt:P31/wdt:P279* ?c . # find instances of subclasses of city
11  ?city p:P6 ?statement .          # with a P6 (head of government) statement
12  ?statement ps:P6 ?mayor .       # ... that has the value ?mayor
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14  FILTER NOT EXISTS { ?statement pq:P582 ?x } # ... but the statement has no P582
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16  # Now select the population value of the ?city
17  # (wdt: properties use only statements of "preferred" rank if any, usually mean
18  ?city wdt:P1082 ?population .
19  # Optionally, find English labels for city and mayor:
20  SERVICE wikibase:label {
21    bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en" .
22  }
23 }
24 ORDER BY DESC(?population)
25 LIMIT 10
```

Below the query is a large blue play button icon. To the right of the query text, there are buttons for 'Bubble chart' and a question mark icon. At the bottom right, there are buttons for 'Code', 'Download', and a link labeled 'L'.

city	cityLabel	mayor	mayorLabel
wd:Q1490	Tokyo	wd:Q261703	Yuriko Koike
wd:Q1489	Mexico City	wd:Q5771800	Claudia Sheinbaum
wd:Q8646	Hong Kong	wd:Q19217	Carrie Lam
wd:Q1530	Baghdad	wd:Q19367467	Zekra Alwach
wd:Q11462	Surabaya	wd:Q12522317	Tri Rismaharini
wd:Q38283	Yokohama	wd:Q529363	Eumiko Hayashi

Examples and hands-on time!

Wikidata Query Service Examples Help More tools English

```
1 #Largest cities with female mayor
2 #added before 2016-10
3 #TEMPLATE={"template":"Largest ?c with ?sex head of government","variables":{"?sex"
4 SELECT DISTINCT ?city ?cityLabel ?mayor ?mayorLabel
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7   BIND(wd:Q6581072 AS ?sex)
8   BIND(wd:Q515 AS ?c)
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10  ?city wdt:P31/wdt:P279* ?c . # find instances of subclasses of city
11  ?city p:P6 ?statement .           # with a P6 (head of government) statement
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13  ?mayor wdt:P21 ?sex .           # ... where the ?mayor has P21 (sex or gender) female
14  FILTER NOT EXISTS { ?statement pq:P582 ?x } # ... but the statement has no P582
15
16  # Now select the population value of the ?city
17  # (wdt: properties use only statements of "preferred" rank if any, usually mean
18  ?city wdt:P1082 ?population .
19  # Optionally, find English labels for city and mayor:
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22  }
23 }
24 ORDER BY DESC(?population)
25 LIMIT 10
```

Bubble chart ▾ 10 results in 2637 ms ↗ Code Download ↘ L

city	cityLabel	mayor	mayorLabel
wd:Q1490	Tokyo	wd:Q261703	Yuriko Koike
wd:Q1489	Mexico City	wd:Q5771800	Claudia Sheinbaum
wd:Q8646	Hong Kong	wd:Q19217	Carrie Lam
wd:Q1530	Baghdad	wd:Q19367467	Zekra Alwach
wd:Q11462	Surabaya	wd:Q12522317	Tri Rismaharini
wd:Q38283	Yokohama	wd:Q529363	Eumiko Hayashi

Wikidata tools and apps

Monumental is a site that allows you to explore built heritage and learn more about monuments.

<https://tools.wmflabs.org/monumental/>

MONUMENTAL Heidelberg Castle X LOGIN

Heidelberg Castle
Heidelberger Schloss

WIKIDATA

Heidelberg · Karlsruhe Government Region · Baden-Württemberg · Germany

50 images and 28 subcategories 33 languages

Kulturdenkmal schloss-heidelberg.de



EN DE :

Wikipedia

Das **Heidelberger Schloss** ist eine der berühmtesten Ruinen Deutschlands und das Wahrzeichen der Stadt Heidelberg. Bis zu seiner Zerstörung im Pfälzischen Erbfolgekrieg war es die Residenz der Kurfürsten von der Pfalz. Seit den Zerstörungen durch die Soldaten Ludwigs XIV. 1689 und der Sprengung durch französische Pioniere am 6. September 1693 wurde das Heidelberger Schloss nur teilweise restauriert. Nachdem am 24. Juni 1764 Blitze die teilweise renovierte Anlage in Brand gesetzt hatten, wurde die Wiederherstellung aufgegeben. Die Schlossruine aus rotem Neckartäler Sandstein erhebt sich 80 Meter über dem Talgrund am Nordhang des Königstuhls und dominiert dort das Bild der Altstadt. Der Ottheinrichsbau, einer der Palastbauten des Schlosses, zählt zu den bedeutendsten Bauwerken des deutschen Manierismus. In der kulturgeschichtlichen Epoche der Romantik wurde die Schlossruine zu einem Inbegriff einer vergangenen und bewundenswerten Epoche stilisiert. Es zählt heute zu den meistbesuchten touristischen Sehenswürdigkeiten Europas.

READ MORE ON WIKIPEDIA

Properties

General data

instance of	château
	castle
	sandstone
	Gothic architecture
	Renaissance architecture

Crotos is a search and display engine for visual artworks, based on Wikidata and using Wikimedia Commons files.

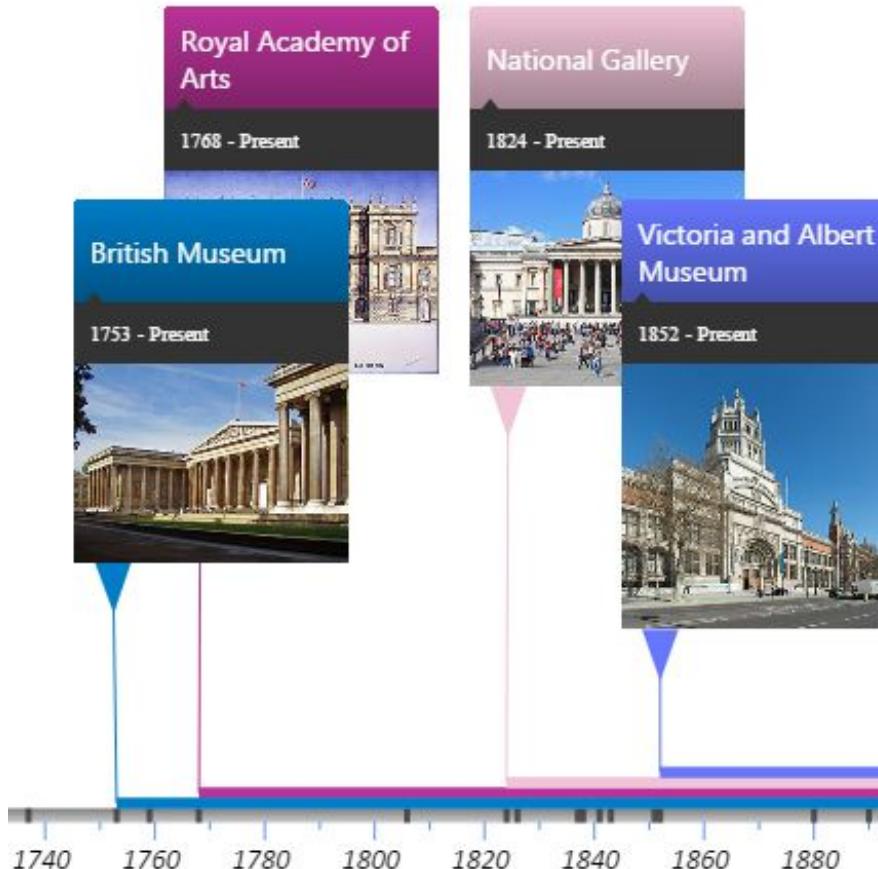
<https://http://zone47.com/crotos/>

The screenshot shows the Crotos search interface with the following details:

- Header:** Language English, Images/page 20, Contribution mode, and a date range from -40000 to 2016.
- Search Bar:** The search term "vermeer" is entered.
- Results Summary:** 144 Results.
- Filter:** Everything.
- Pagination:** Page 1 of 8, with a Random button.
- Artwork Grid:** A grid of 14 artworks, each with a thumbnail, title, artist, and collection information. The visible titles include:
 - Früchtestück by Barend van der Meer - Bavarian State Painting Collections
 - Young Lady with a Lapdog by Eglon van der Neer - Staatliche Kunsthalle Karlsruhe
 - The Suitor's Visit by Gerard ter Borch - National Gallery of Art
 - Woman writing a letter by Gerard ter Borch - Mauritshuis
 - A Woman Playing a Lute by Frans van Mieris the Elder - National Galleries of Scotland
 - Woman in Blue Reading a Letter by Johannes Vermeer - Rijksmuseum
 - Flower garland with portrait of William III of Orange... by Jan Davidsz. de Heem - Jan Vermeer van Utrecht - Museum of Fine Arts of Lyon
- Bottom Navigation:** A horizontal navigation bar with icons for back, forward, search, and other functions.

Histropedia allows you to generate interactive timelines with events linked to Wikipedia articles.

<http://histropedia.com/>



Inventaire: keep an inventory of your books!

<https://inventaire.io/>

The screenshot shows the Inventaire mobile application interface. At the top, there's a header with a blue 'inv' logo, a search bar, and various navigation icons. Below the header, the word 'Work' is displayed. The main area shows a grid of book covers. In the center, there's a larger image of the book 'The Alchemist' by Paulo Coelho, with its title and author name visible. To the right of this central image, there are two smaller versions of the same book cover. Below this grid, a detailed card for 'The Alchemist' is shown with the following information:

The Alchemist
wd:Q179021

The Alchemist (Portuguese: O Alquimista) is a novel by Brazilian author Paulo Coelho that was first published in 1988. Originally written in Portuguese, it became a widely translated international bestseller. An allegorical novel, The Alchemist follows a young Andalusian shepherd in his journey to the pyramids of Egypt, after having a recurring dream of finding a treasure there.

Read more or edit on Wikipedia

Authors

 Paulo Coelho
1947 -

original title: O Alquimista
date of publication: 1988
genre: adventure novel, speculative fiction novel, esoteric novel
narrative location: Andalusia
follows: The Pilgrimage
followed by: Brida

Ebooks:  on Internet Archive

More tools are listed on
Wikidata:

[https://www.wikidata.org/wiki/
Wikidata:Tools/Visualize_data](https://www.wikidata.org/wiki/Wikidata:Tools/Visualize_data)

Wikidata

Search Wikidata

Wikidata:Tools/Visualize data



< Wikidata:Tools

Visualize data

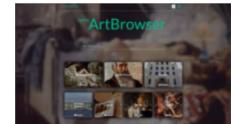
Other languages: [Deutsch](#) • [English](#) • [Nederlands](#) • [asturianu](#) • [dansk](#) • [español](#) • [français](#) • [português](#) • [slovenščina](#) • [svenska](#) • [čeština](#) • [македонски](#) • [русский](#) • [العربية](#) • [ไทย](#) • [日本語](#)

Ancient intellectual network

Dataviz map of the relationships between master and student from Socrates to the end of the Hellenistic Period.

Art Browser

OpenArtBrowser invites you to browse through the world of arts, enjoy beautiful artworks and learn interesting things. We provide paintings, drawings and sculptures all over the world and from many periods. For each artwork, metadata and related artworks are shown. Related means, that the artworks share the same artist, movement, or even motif.



Art Browser

CHAPTER 2

Linked Open Data

First: How OSM and Wikimedia benefit from each other

OSM has been used to create maps to illustrate Wikipedia articles and populate Wikimedia Commons.

Weybridge

This is an [old revision](#) of this page, as edited by [80N](#) ([talk](#) | [contribs](#)) at 08:39, 20 March 2006 (Add map from openstreetmap.org). The present address (URL) is a [permanent link](#) to this revision, which may differ significantly from the [current revision](#).

(diff) ← Previous revision | Latest revision (diff) | Newer revision → (dif)



Weybridge is a town in the [Elmbridge](#) district of [Surrey](#) in [South East England](#). It is bounded to the North by the [River Thames](#) at the mouth of the [River Wey](#), from which it gets its name.



Map of Weybridge (from OpenStreetMap.org)

Contents ▾

History

The early history of Weybridge was simply as a river crossing. In 1537 it became the location of [Oatlands Palace](#) built by [Henry VIII](#). When it was demolished in 1650, bricks from its walls helped to line the then new Wey Navigation. Part of the original site of the Palace is now occupied by Oatlands Park Hotel.

At the bottom of Monument Hill, close to the town centre is a monument to the Duchess of York, erected by public subscription in 1820 from the remains of the original [Seven Dials](#) Monument that stood in St.Martin's Lane London until 1773.

The famous former [Brooklands](#) Aerodrome and Race Circuit is located here, just south of the railway station. It is now the location for the Brooklands Museum. Brooklands was also the home

OSM has been used to
create maps to illustrate
Wikipedia articles and
populate Wikimedia
Commons.



OSM powers the Wikimedia Foundation's [Kartotherian](#) map tile service, which is used by the [Kartographer](#) MediaWiki extension and almost all other interactive maps on the Wikimedia projects.

Centro Storico is just as full of historic monuments as it is of designer boutiques and showrooms, restaurants and caffes - you will find almost all one comes to find in Milan for within not more than a quarter's walk.

The defunct old Milan district of "*Centro Storico*" included a broader area; the area covered in this guide corresponds to the *Quartiere 101 - Duomo* of the present-day *Zona 1*.

^ Get in

To get to the Centro Storico usually means getting to its very central point - the Piazza Duomo. Two metro lines cross ride underneath it, and many trams stop right next to the Piazza. The only train station within the Centro Storico is Milano Cadorna, on its western outskirts.

From Milano Malpensa Airport

Take the Malpensa Express to Milano Cadorna station and from there simply enjoy the Centro Storico by walking eastwards, or take the metro for the [1](#)

Duomo [M1](#) [M3](#). Trams 1 and 27 will also take you into the heart of the Centro Storico, over a route with some memorable views.



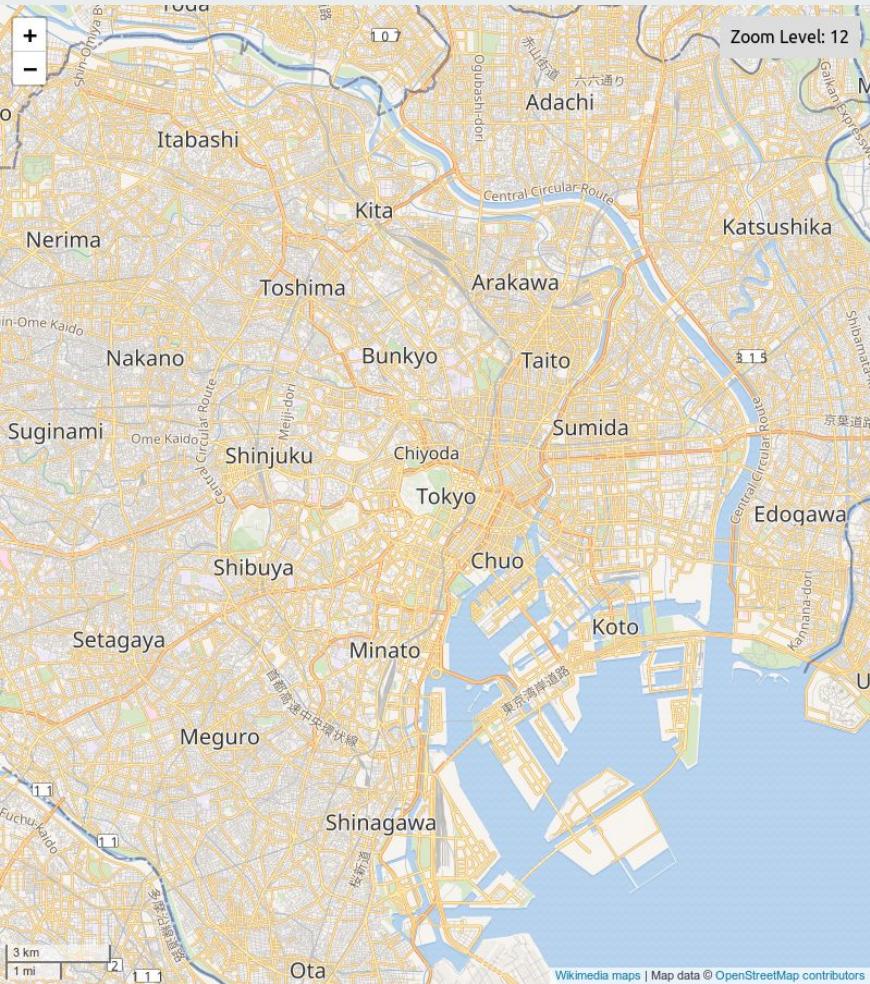
From Linate Airport

The bus lines 73 and X73 connect the Linate Airport with Piazza San Babila in the east of the Centro Storico, which has a station on the [M1](#) network.



The Duomo metro station on M1 and

The Wikimedia Foundation
released internationalized
map tiles for Kartotherian,
leveraging OSM's `name:=*`
tags.



WikiMiniAtlas, an older MediaWiki plugin still in use in many Wikipedias, is also powered by OSM data, including 3D building data.



The OSM Wiki is powered by MediaWiki, the wiki engine developed by Wikimedia, and this also provides access to Wikimedia Commons images.



Main Page
The map
Map Features
Contributors
Help
Blogs
Shop
Donations
Recent changes

Tools

What links here
Related changes
Special pages
Printable version
Permanent link
Page information
Cite this page

Create account Log in

Tag:man_made=adit

Available languages — Tag:man made=adit [purge](#) · Help

· čeština · Deutsch · English · español · français · polski · português · русский · 日本語

An **adit** is a (nearly) horizontal entrance to the underground, by which resources can be extracted or a mine can be entered, ventilated or drained of water. The visible portal of the adit is mapped as a node.



Tagging

man_made=adit

The adit itself. In case of a node, it is describing the entrance point at the surface.

resource=*

The resource that is or was extracted in the mine. Visit the resources page to view a list of common values.

operator=*

The operator of the adit, usually the operator of the surrounding mine.

length=*

length of the adit in meters (or other specified unit).

name=*

The name of the adit.

direction=*

pointing from the gallery outwards (useful only if the adit is mapped as a node)

All of these tags may coexist on a single node.

Rendering

Common symbol for operating mine: hammer and pick

[taginfo](#) [More...]

7 971 0.65 %

The OpenStreetMap Foundation has derived its [Local Chapters agreement](#), [Trademark Policy](#), and [Terms of Use](#) from corresponding documents from the Wikimedia Foundation.



Trademark Policy

[Contents \[show\]](#)

Adopted by the OSMF board on January the 7th 2018.

Introduction

Why does OpenStreetMap have marks?

The OpenStreetMap marks represent OpenStreetMap and its work to bring open map data to the entire world. When users see the OpenStreetMap name and logo, they should be confident that they are looking at a high quality map that is the result of the rigorous and comprehensive collaboration process of OpenStreetMap. Trademark protection helps reinforce that connection.

What are the goals of this trademark policy?

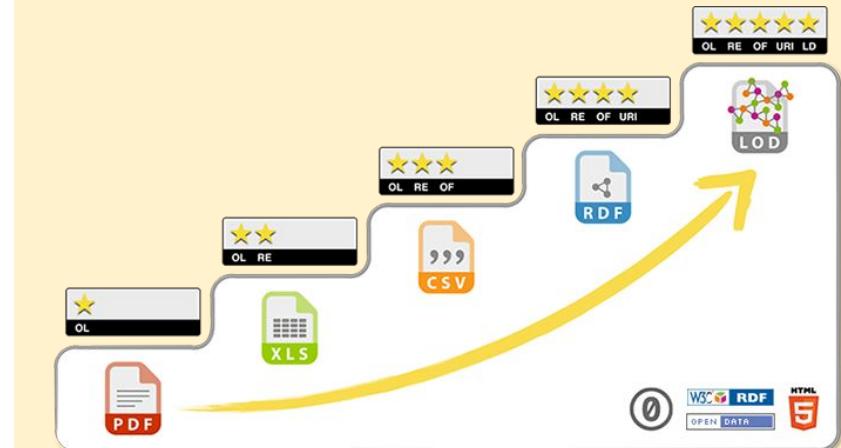
The goodwill supporting the OpenStreetMap marks has been generated by a prolific and passionate volunteer community. The OpenStreetMap Foundation has prepared this policy to preserve and protect that goodwill by ensuring that uses of the marks are consistent with OpenStreetMap's mission and promote the OpenStreetMap movement.

How is this trademark policy different from most trademark policies?

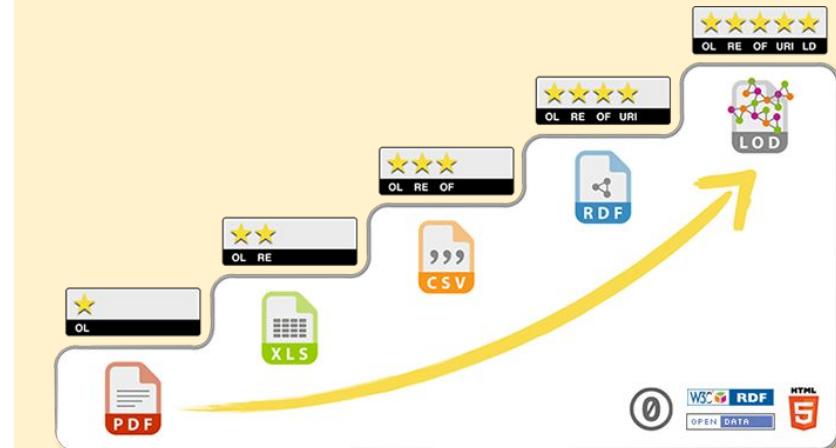
This trademark policy seeks to make trademark licensing as easy as possible for the contributors who created OpenStreetMap, by making explicit that many uses do not require a trademark licence, and by empowering them to use OpenStreetMap's marks without a trademark licence for community-focused

Why link OSM and Wikidata?

Tim Berners-Lee, the inventor of the World Wide Web and initiator of the W3C Linked Data project, suggested a 5 star deployment scheme for Linked Open Data.



-
- 1. On the Web
 - 2. Machine-readable
 - 3. Open data format
 - 4. In RDF (use IRIs)
 - 5. Linked to other datasets



Wikidata items on places
can link to OSM relations
using the [OSM relation ID](#)
(P402) property.

Wikidata Search Wikidata

(Q2966)

English

Heidelberg
city in Baden-Württemberg, Germany

Identifiers

Freebase ID
[/m/0cm5m](#)
1 reference
stated in [Firebase Data Dumps](#)
publication date 28 October 2013

NUTS code
[DE125](#)
0 references

Nomisma ID
[heidelberg](#)
0 references

OSM relation ID
[285864](#)
0 references

Quora topic ID
[Heidelberg-Germany](#)
0 references

US National Archives Identifier
[10044743](#)
0 references

Encyclopædia Britannica Online ID
[place/Heidelberg](#)
0 references

archINFORM location ID
[145](#)
1 reference
reference URL https://www.archinform.net/service/wd_aior.php
stated in [archINFORM](#)
retrieved 5 August 2018

National Library of Israel identifier
[000986952](#)
1 reference
stated in [Virtual International Authority File](#)
VIAF ID 144258029
reference URL <http://www.viaf.org/viaf/144258029>
retrieved 1 April 2016

Great Russian Encyclopedia Online ID
[2347969](#)
0 references

Image Archive, Herder Institute
[Q2966](#)
0 references



OSM objects can link to corresponding Wikipedia articles and Wikidata items using the wikipedia=* and wikidata=* tags respectively.

There are also secondary tags like brand:wikidata= and architect:wikidata=*.*

OpenStreetMap Edit History Export More Log In Sign Up

Search Where is this? Go

Relation: Heidelberg (285864)

Translations - Arabic

Edited 9 months ago by [احمدو](#)
Version #29 · Changeset #65537272

Tags

admin_level	6
alt_name:ar	هادلبرغ
boundary	administrative
de:amtlicher_gemeindeschlüssel	08221000
de:place	city
de:regionalschlüssel	082210000000
name	Heidelberg
name:ar	هادلبرغ
name:de	Heidelberg
name:el	Χαϊδελφέρη
name:ko	하이델베르크
name:prefix	Stadt
name:ru	Гайдельберг
source	www.lgl-bw.de
type	boundary
wikidata	Q2966
wikipedia	de:Heidelberg

Part of

Relation Heidelberg (2998772) (as part)
Relation Metropolregion Rhein-Neckar (9033992) (as part)

Members

Way 32065894 as outer

OpenStreetMap contributors Make a Donation Website and API terms

Ontology: Wikidata items about features can link to “equivalent” OSM features using the OSM tag or key (P1282) property.

<p>0 references</p> <p>light source</p> <p>0 references</p> <p>sea mark</p> <p>0 references</p> <p>building</p> <p>0 references</p>	<p>0 references</p> <p>topic's main category</p> <p>Category:Lighthouses</p> <p>0 references</p>
<p>image</p>	<p>history of topic</p>
	<p>History of lighthouses</p> <p>0 references</p>
<p>Nantucket light 1.jpg</p> <p>589 x 1,040; 127 KB</p> <p>0 references</p>	<p>described by source</p> <p>Nordisk familjebok</p> <p>0 references</p> <p>Armenian Soviet encyclopedia</p> <p>0 references</p>
	<p>OSM tag or key</p> <p>Tag:man_made=lighthouse</p> <p>0 references</p>
<p>Lindau-Hafen-Sonnenuntergang.jpg</p> <p>1,786 x 1,337; 293 KB</p> <p>0 references</p>	<p>equivalent class</p> <p>http://dbpedia.org/ontology/Lighthouse</p> <p>described at URL http://mappings.dbpedia.org/index.php/OntologyClass:Lighthouse</p> <p>retrieved 16 June 2015</p> <p>1 reference</p> <p>imported from Wikimedia project DBpedia</p>
	<p>has part</p> <p>light house</p> <p>0 references</p>
	<p>properties for this type</p>

Ontology: Tag definitions on the OSM Wiki can link to “equivalent” Wikipedia articles and Wikidata items.



Main Page
The map
Map Features
Contributors
Help
Blogs
Shop
Donations
Recent changes

Tools

What links here
Related changes
Special pages
Printable version
Permanent link
Page information
Cite this page

Page Discussion Read View source View history

Create account Log in

Tag:man_made=adit

Available languages — Tag:man_made=adit [purge](#) · Help

An [adit](#) is a (nearly) horizontal entrance to the underground, by which resources can be extracted or a mine can be entered, ventilated or drained of water. The visible portal of the adit is mapped as a node.



Tagging

man_made=adit

The adit itself. In case of a node, it is describing the entrance point at the surface.

resource=*

The resource that is or was extracted in the mine. Visit the resources page to view a list of common values.

operator=*

The operator of the adit, usually the operator of the surrounding mine.

length=*

length of the adit in meters (or other specified unit).

name=*

The name of the adit.

direction=*

pointing from the gallery outwards (useful only if the adit is mapped as a node)

All of these tags may coexist on a single node.

Rendering

Common symbol for operating mine: hammer and pick



Description

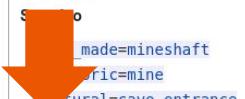
A type of entrance to an underground mine which is horizontal or nearly horizontal.

Used on these elements



Useful combination

- **name=***
- **operator=***
- **resource=***
- **disused=***



Wikidata

Q58917

Status: in use

[taginfo](#) [More...]

7971 0.65 %

Wikimedia maps can show geometry from OSM.

- ▶ Squares in Heidelberg (11 C, 4 F)
 - ▶ Streets in Heidelberg (73 C, 54 F)
- T
- ▶ Things named after Heidelberg (8 C, 3 F)
 - ▶ Transport in Heidelberg (19 C, 32 F)
 - ▶ Tupper Scrapbooks volume 36 Heidelberg (7 F)

U

- ▶ United States Army in Heidelberg (7 C, 9 F)

V

- ▶ Views of Heidelberg (6 C, 26 F)

Pages in category "Heidelberg"

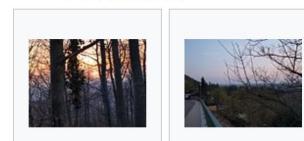
This category contains only the following page.

- Heidelberg

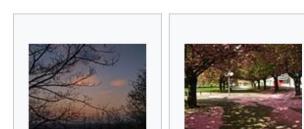
Media in category "Heidelberg"

The following 200 files are in this category, out of 366 total.

(previous page) (next page)



2011-03-24-184658 ... 2011-03-25-184627 ...
1,200 × 900; 354 KB 1,200 × 900; 271 KB



Authority control

Q2966

VIAF ID: 144258029

GND ID: 4023996-2

Library of Congress authority ID:

n81096075

National Diet Library Auth ID:

00628943

OSM relation ID: 285864

National Library of Israel identifier:

000986952

US National Archives Identifier:

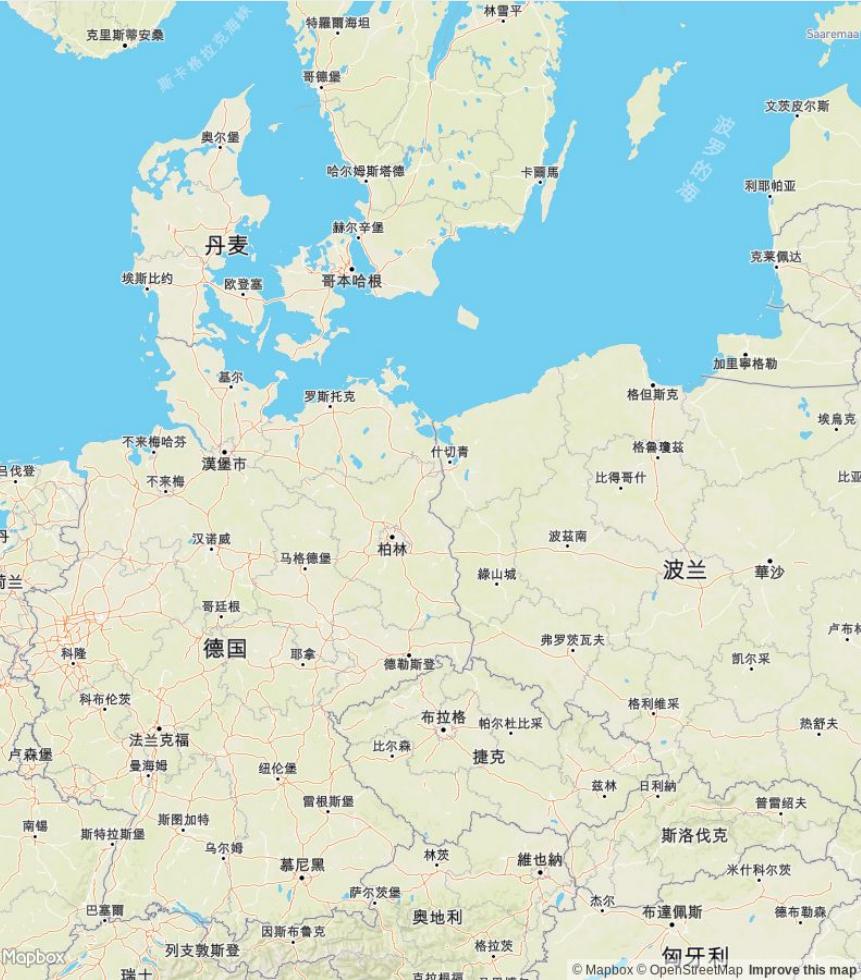
10044743

Reasonator Scholia Statistics

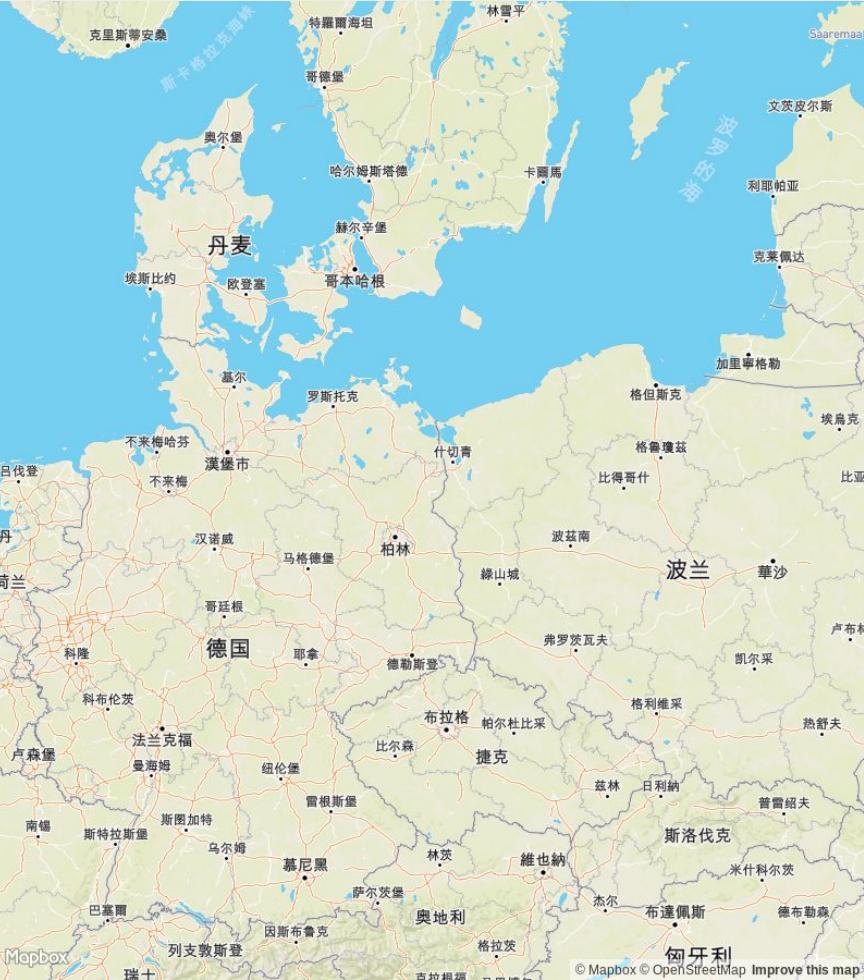
WikiShootMe

Mapbox and MapTiler uses Wikidata to help with the localization of their map products.

If there are missing `name:=` tags on an OSM object, they pull labels from corresponding Wikidata entries.*



For example, Heidelberg has 13 and 5 `name:=*` tags in its `place=city` node and admin boundary relation, while Wikidata has 123 labels for the item.



User tchaddad recently finished a GSoC project to integrate `wikidata=*` tags into Nominatim. This project is intended to improve the search results by looking at Wikidata for additional relevance data.



tchaddad's diary



Recent diary entries

End of Project Summary

Posted by tchaddad on 2 September 2019 in English (English)

Summer has come to an end, and so this post is to wrap up the progress made over the course of the "Add Wikidata to Nominatim" project. Overall, the main contributions are documented in the 4 preceding diary posts, and in:

- updated steps for extracting Wikipedia data and calculating importance scores
- a new script for extracting Wikidata items and place types

These new processes have made big improvements in several OSM-to-Wikipedia comparison metrics as compared to equivalent numbers from 2013 (when the previous Wikipedia snapshot was taken).

Improved Numbers

For context, the number of Wikipedia articles in the top 40 languages in 2013 was 80,007,141, and the number of Wikipedia articles for the same 40 languages in 2019 was 142,620,084 - an increase of ~78%.

Within these article records, in 2013 it was possible under the old processing steps to attach latitude and longitude numbers to 692,541 articles, while in 2019 it was possible to enrich 7,755,392 records with location information - an increase of ~1,020%. This particular statistic largely reflects an improvement in the source Wikipedia / Wikidata projects.

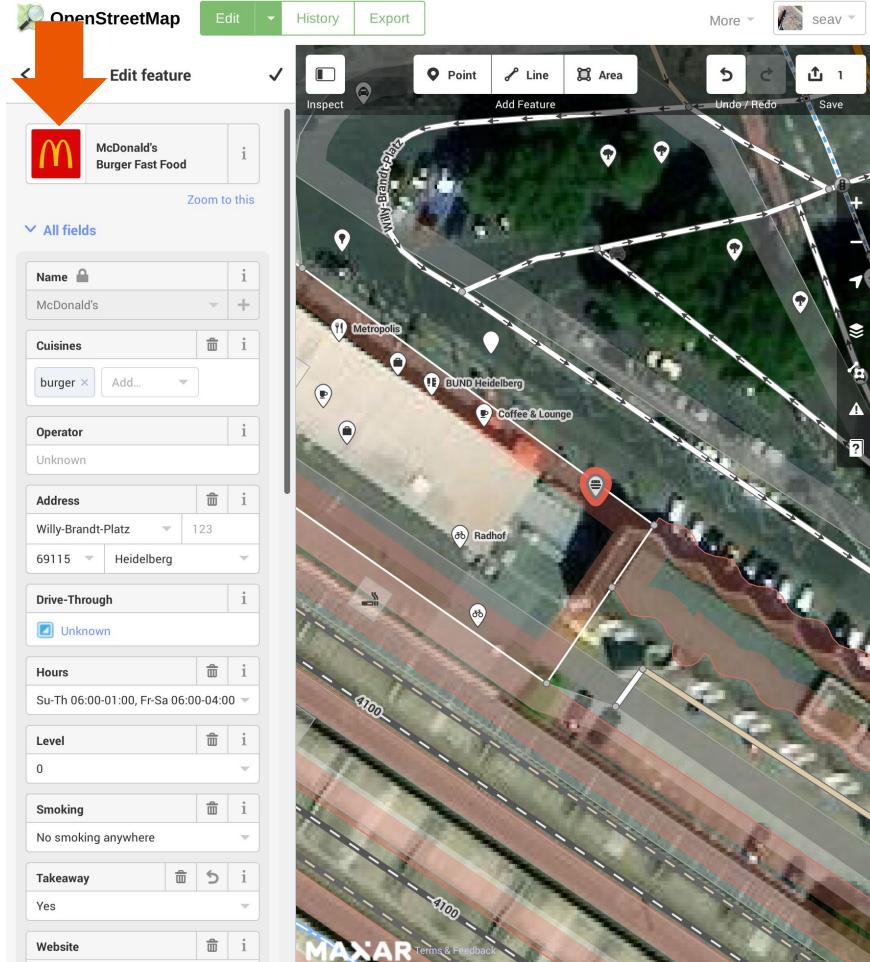
More exciting, with the old method of linking Wikipedia articles to `osm_ids`, it was possible to link 313,606 Wikipedia article importance scores to `osm_ids`, but with the new method that uses both Wikidata item ids, and Wikipedia pages together, the number of Wikipedia article importance scores that can be linked has risen to 4,730,972 - an increase of ~1,409%. This increase is due to both the large number of Wikipedia and Wikidata tags added by OSM contributors since 2013, as well as the inclusion of Wikidata item ids in the linking process for the first time via this project.

Future Work

Although the project technically concludes today, there are obviously always areas of future work where more gains can be made. These include:

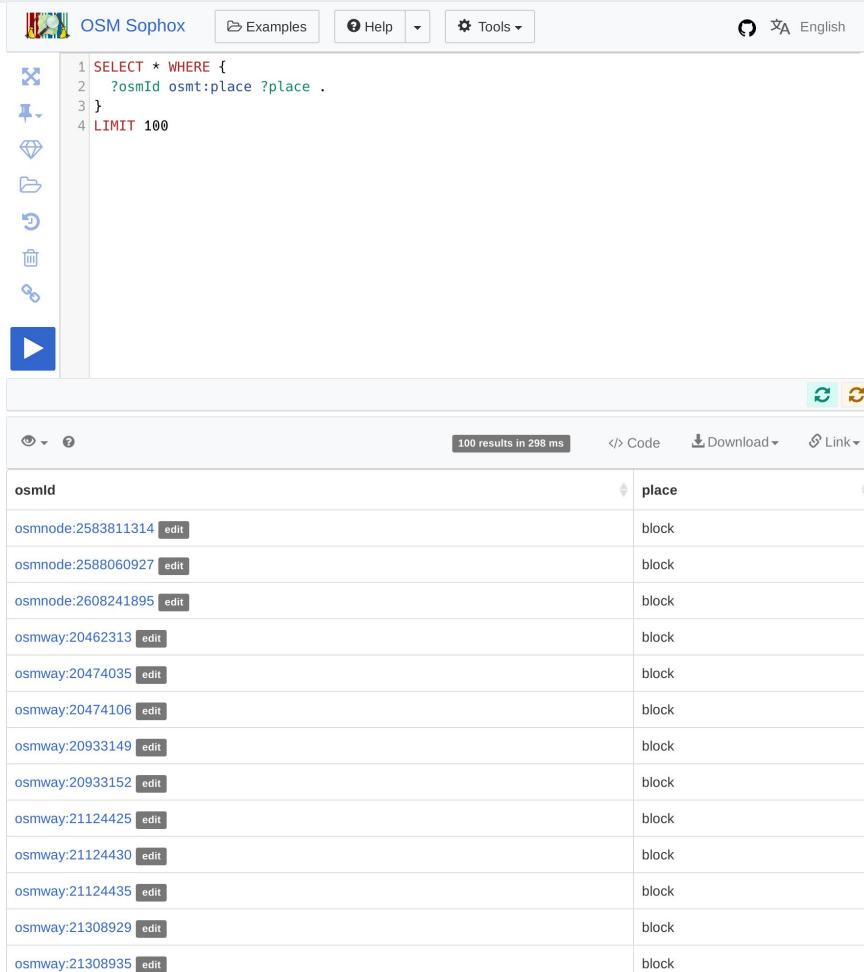
The Name Suggestion Index uses Wikidata to provide brand identity and improved tagging in iD and Vespucci.

<https://github.com/osmlab/name-suggestion-index>



Yurik Astrakhan (OSM: nyuriks) created [Sophox](#), a SPARQL endpoint for OSM. This service can use RDF *federation* to also query linked Wikidata items.

<https://wiki.osm.org/Sophox>
<https://sophox.org/>



The screenshot shows the Sophox web interface. At the top, there is a navigation bar with icons for user profile, examples, help, tools, and language selection (English). Below the navigation bar is a sidebar with various icons for file operations like new, open, save, copy, paste, delete, and link. A main content area contains a SPARQL query:

```
1 SELECT * WHERE {  
2   ?osmId osmt:place ?place .  
3 }  
4 LIMIT 100
```

Below the query is a large blue play button icon. The results section shows a table with 100 rows, each containing an OSM ID and a place name, both of which are links to edit pages. The table has two columns: "osmId" and "place". The results are filtered to show only "block" entries.

osmId	place
osmnode:2583811314	block
osmnode:2588060927	block
osmnode:2608241895	block
osmway:20462313	block
osmway:20474035	block
osmway:20474106	block
osmway:20933149	block
osmway:20933152	block
osmway:21124425	block
osmway:21124430	block
osmway:21124435	block
osmway:21308929	block
osmway:21308935	block

Addendum: The OSM Wiki has the [Wikibase](#) extension installed. This is intended to provide better multilingual machine-readable data on OSM's tags.

highway=motorway (Q4980)



High capacity highways designed to safely carry fast motor traffic.

Contents ▾

Statements

instance of



0 references

use on relations



0 references

permanent tag ID



0 references

group



0 references

key for this tag



0 references

Wikidata concept



0 references

image



A4-passante di mestre dd.png

image caption Αυτοκινητόδρομος (Greek)

0 references



highway=motorway

0 references

highway=primary

0 references

CHAPTER 3

OSM Wikidata Matcher

(see second part of the presentation)

Linking OpenStreetMap and Wikidata

A semi-automated, user-assisted editing tool

<https://osm.wikidata.link/>

Edward Betts

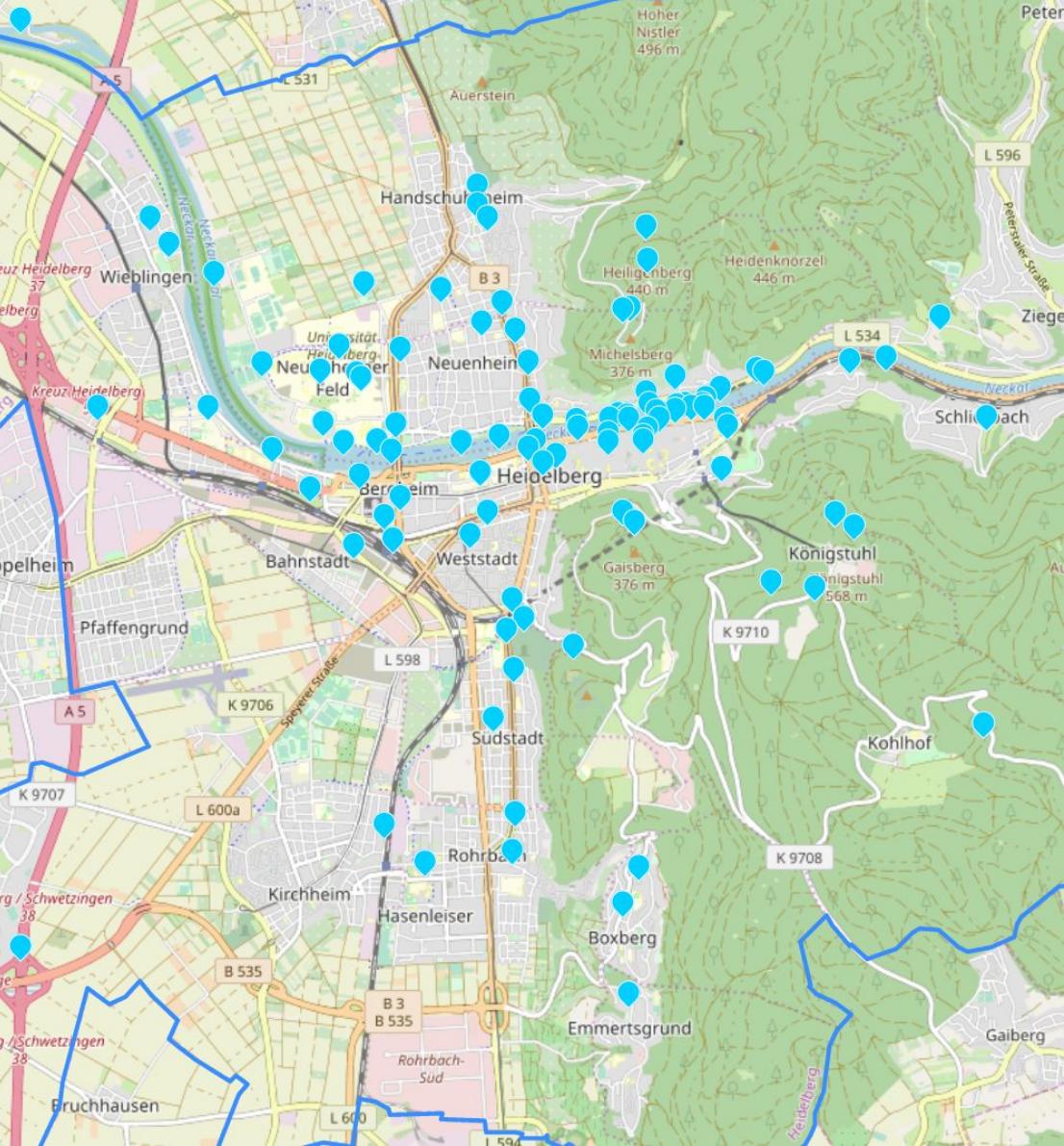
Twitter: @EdwardBetts

Photo by Edward Betts // CC 0

Heidelberg

The software finds Wikidata items with a matching object in OSM

There are 111 matches in Heidelberg



OpenStreetMap and Wikidata match criteria

- entity type AND
- coordinates AND
- name OR
street address OR
identifier

Match on identifier

- Railway station code
- IATA airport code
- ICAO airport code
- FAA airport code
- ISO 3166-2 country code
- NRHP reference number
- UK Government Statistical Service code
- FIPS 6-4 (US counties)
- FIPS 5-2 (code for US states)
- USGS GNIS ID
- IBNR ID
- National Heritage List for England number
- EDUBase URN
- Admiralty number (lighthouse)
- Website

What about wikipedia tags?



Photo by Edward Betts // CC 0

Robot edits

Adding links individually is laborious

OpenStreetMap has strict rules about robot editing

Candidate matches need to be checked for false positives

Machine-assisted editing is a good compromise



Photo by Edward Betts // CC 0

Tunnels

Wikidata usually represents tunnels as a single item

OSM often represents them as two ways, one for each direction of traffic or tunnel bore

The software should be changed to recognise tunnels and add the Wikidata tag to both ways



Photo by Edward Betts // CC BY-SA-3.0

Rivers

OSM represents rivers as linear relations

The matcher uses osm2pgsql to load OSM data into Postgis for querying

The only type of relation supported by osm2pgsql is a polygon

The data model it uses has no support for linear relations



Photo by Edward Betts // CC 0

Tram stops

Wikidata represents tram stops in both directions as a single item

OSM represents tram stops as a two node, one for each direction

The nodes are combined into a single relation

These relations are unsupported in osm2pgsql, so the matcher fails to identify the relation



Photo by Edward Betts // CC BY-SA-3.0

The difference between buildings and institutions

- OSM and Wikidata can have separate items for institutions and their buildings
- But not always
- The matcher has to handle this

Improving the information in Wikidata

- Merging duplicate Wikidata items
- Incomplete next level territorial administrative subdivisions data in Wikidata

OSM edits are grouped in a changeset



Makes it easier to review edits

Photo by Edward Betts // CC 0

The software is
written in Python
with websockets

- Flask
- SQLAlchemy
- PostgreSQL
- PostGIS
- gevent
- Bootstrap
- jQuery
- Leaflet

Building on the
work of others
by using APIs

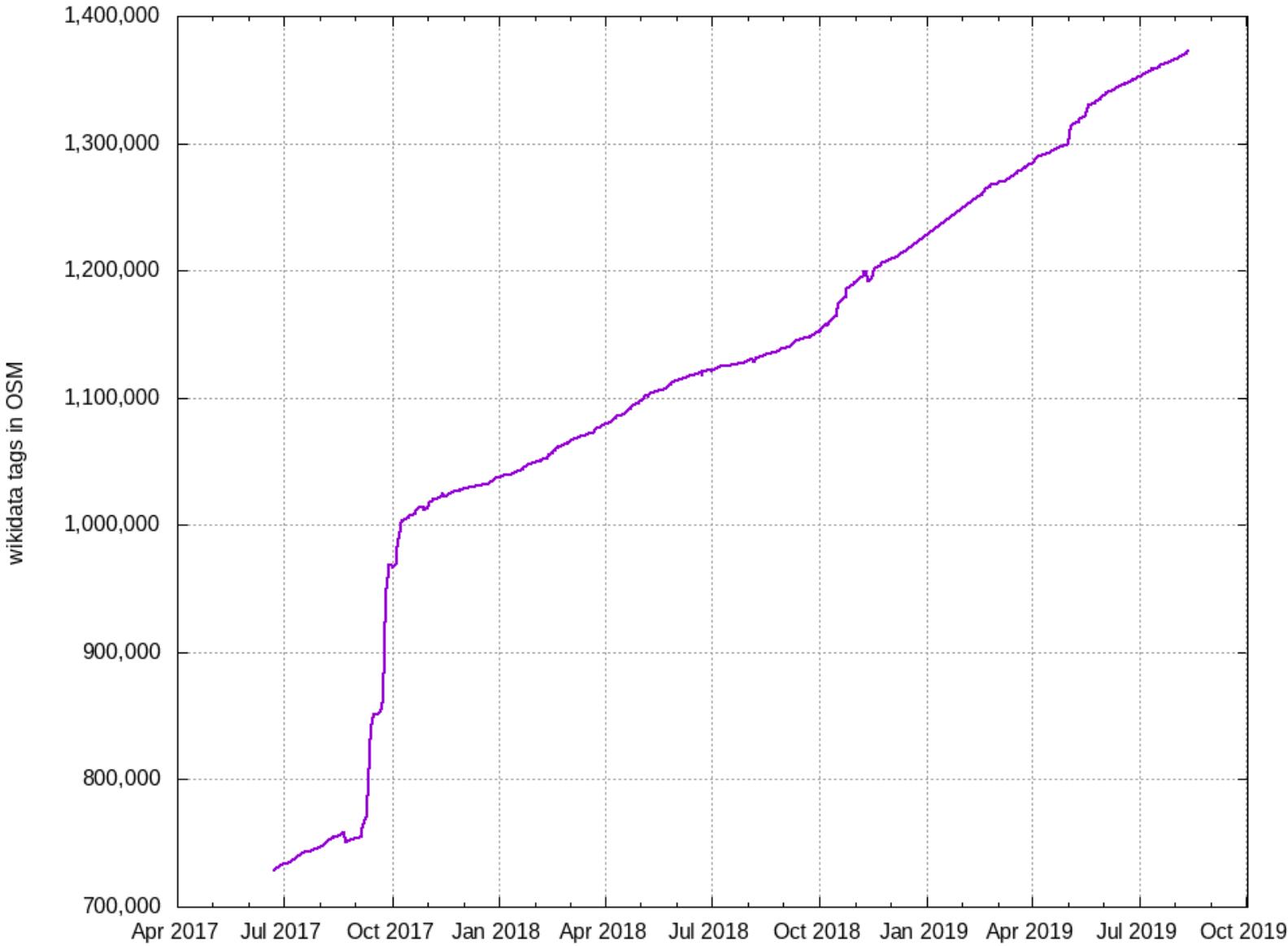
- OSM Overpass
- OSM Nominatim
- OSM map API
- Wikibase API
- Wikipedia API
- Wikidata Query service

Mappers are
using the tool

- Uploads by 200 mappers
- 8,800 changesets uploaded to OpenStreetMap
- 235,250 Wikidata links added

Tag count

There are
1,372,000
objects with a
'wikidata' tag in
OpenStreetMap



Linking OpenStreetMap and Wikidata

A semi-automated, user-assisted editing tool

<https://osm.wikidata.link/>

Edward Betts

Twitter: @EdwardBetts

Photo by Edward Betts // CC 0