

Introduction to Wikibase

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Agenda

I. Wikidata

II. Wikibase

III. Wikibase in action

IV. Future of Wikibase

V. Questions?



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What is Wikidata?



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Wikidata

- Launched October 2012
- A Wikimedia project
- Largest example of a Wikibase instance
- Currently more than 89 Million data items
- Over 45,000 active users with more than 1 edit per month



Wikidata

- A knowledge base
- Part of the Wikimedia projects
- Structured data
- Linked to other databases
- Multilingual
- Collaborative
- Released under public domain (CC0)
- Based on facts and references
- Made for humans and machines

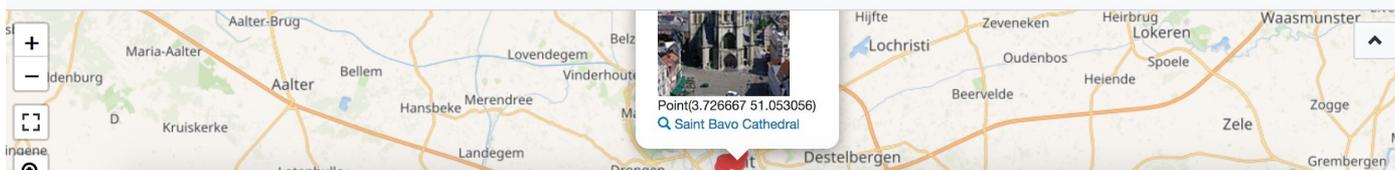


Wikidata Query Service

Wikidata Query Service [Examples](#) [Help](#) [More tools](#) English

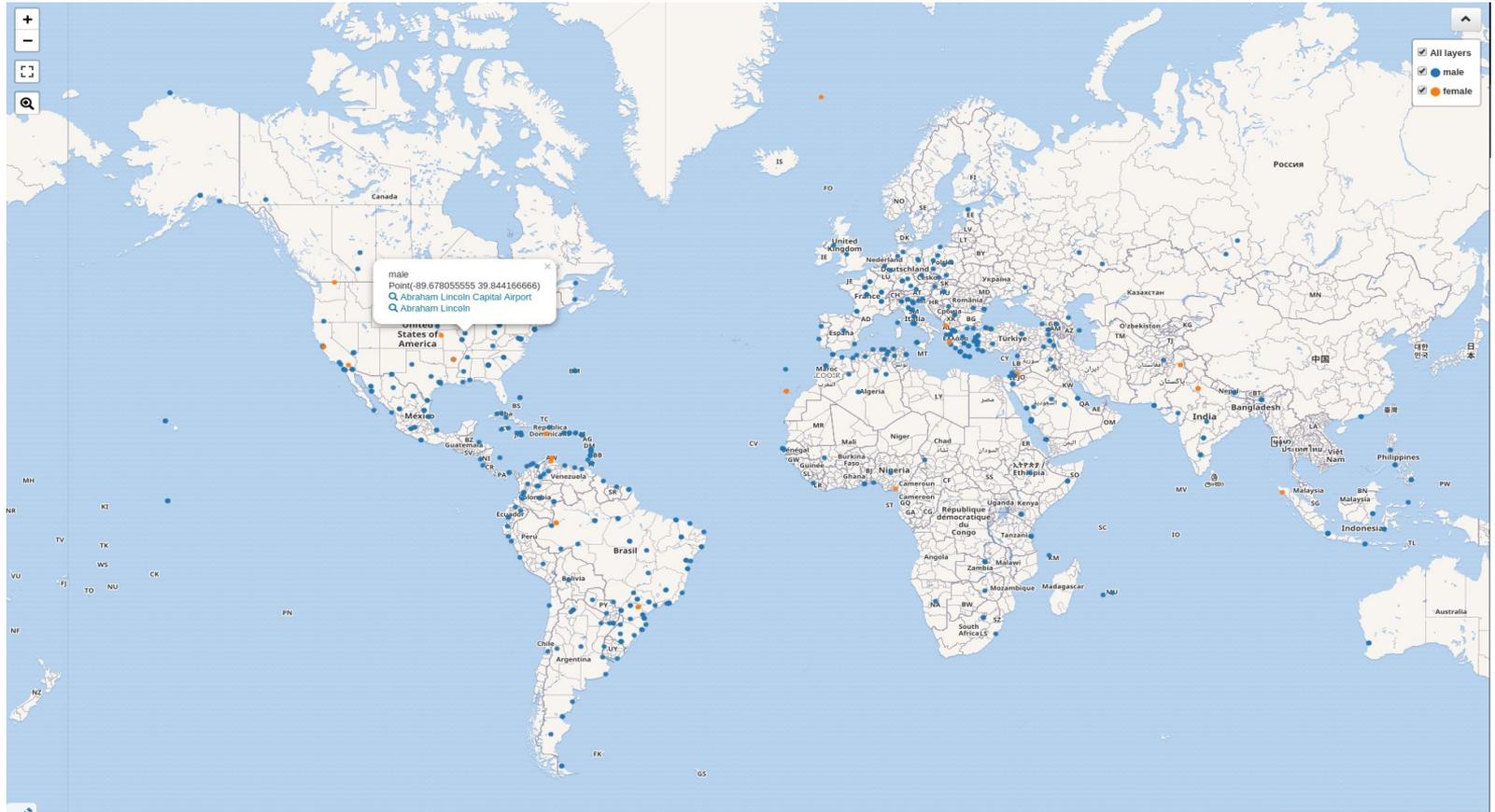
```
1 #defaultView:Map
2 SELECT ?item ?itemLabel ?coord ?image
3 WHERE
4 {
5   ?item wdt:P708 wd:Q869096.
6   ?item wdt:P625 ?coord.
7   OPTIONAL {
8     ?item wdt:P18 ?image
9   }
10  SERVICE wikibase:label { bd:serviceParam wikibase:language "en". }
11 }
```

14 results in 183 ms [Code](#) [Download](#) [Link](#)

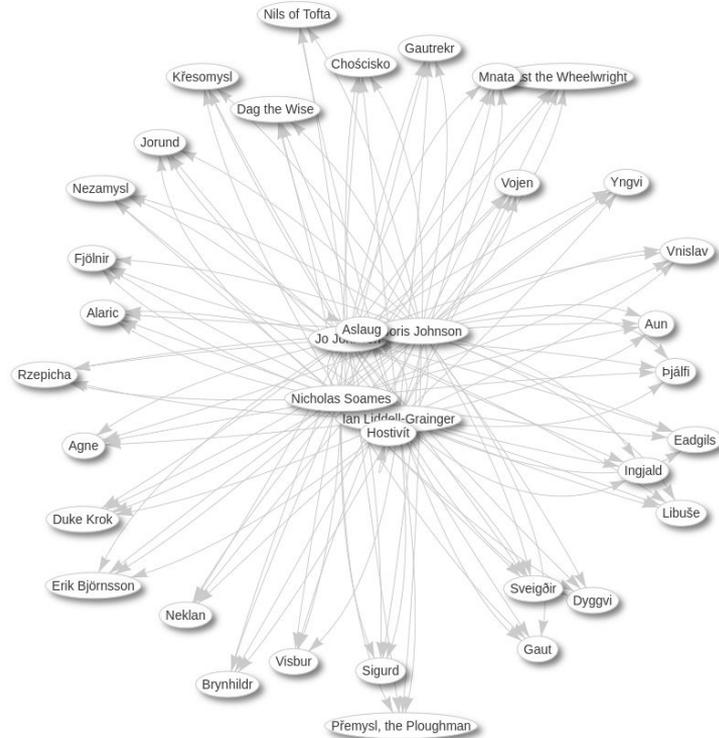


Point(3.726667 51.053056)
Saint Bavo Cathedral

Example query: Airports named after a person, color-coded by gender



Example query: Members of the current UK Parliament who have ancestors who are identified as possibly mythical



Example query: Country flags including a sun



Antigua and Barbuda
[commons:Flag of Antigua and Barbuda.svg](#)



Ecuador
[commons:Flag of Ecuador.svg](#)



Kiribati
[commons:Flag of Kiribati.svg](#)



Mongolia
[commons:Flag of Mongolia.svg](#)



Philippines
[commons:Flag of the Philippines.svg](#)



Argentina
[commons:Flag of Argentina.svg](#)



El Salvador
[commons:Flag of El Salvador.svg](#)



Kurdistan
[commons:Flag of Kurdistan.svg](#)



Namibia
[commons:Flag of Namibia.svg](#)



Republic of Macedonia
[commons:Flag of Macedonia.svg](#)



Bangladesh
[commons:Flag of Bangladesh.svg](#)



Greenland
[commons:Flag of Greenland.svg](#)



Kyrgyzstan
[commons:Flag of Kyrgyzstan.svg](#)



Nepal
[commons:Flag of Nepal.svg](#)



Rwanda
[commons:Flag of Rwanda.svg](#)

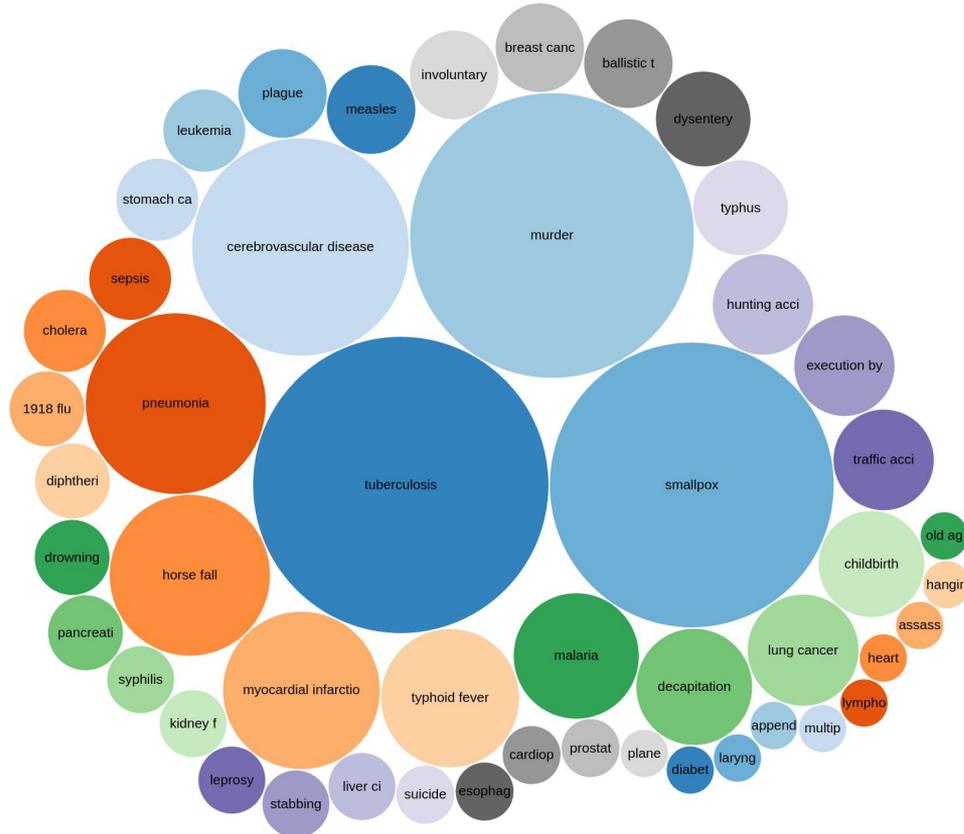


Malawi
[commons:Flag of Malawi.svg](#)



Taiwan
[commons:Flag of the Republic of China.svg](#)

Example query: Cause of death of members of noble families



So, what is Wikibase?



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Wikibase

- The software underlying Wikidata
- Users can create and manage their own knowledge base
- A data model that is flexible; takes knowledge diversity and multilinguality seriously
- A rich JavaScript-based user interface to easily access and update your data
- Exports the data in a number of formats including JSON, RDF/XML, N3, and YAML
- Users may query their database using the SPARQL endpoint



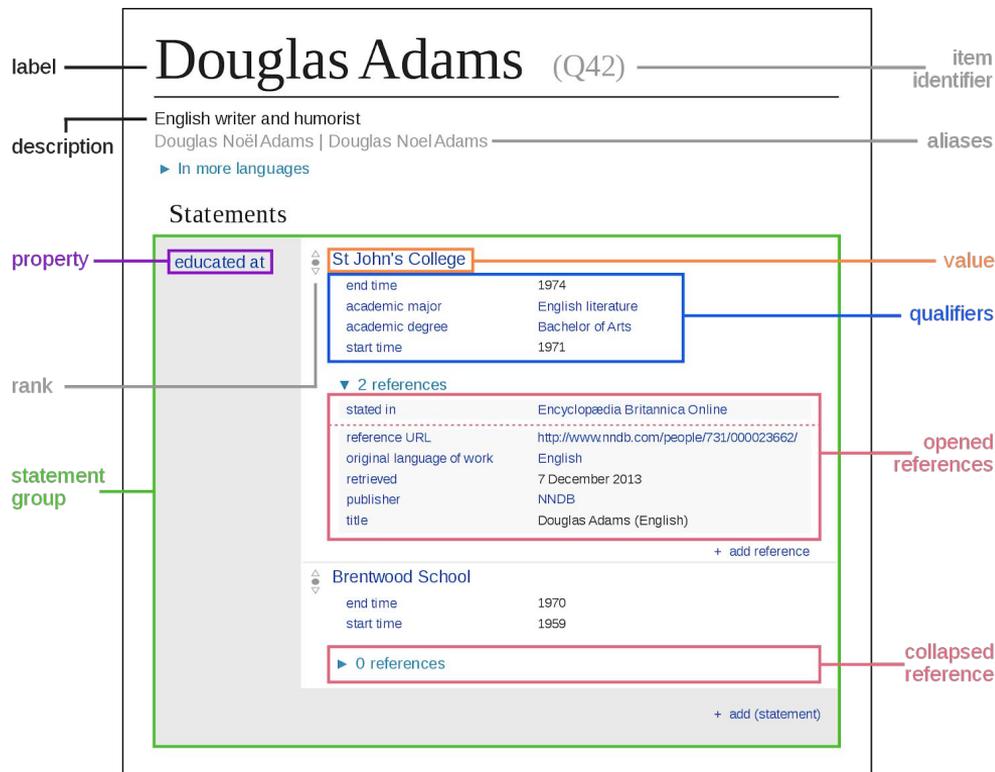
Or, to put it simple

- Order things in the users world
- Makes the data readable and queryable for machines
- Allows links to be made between things and concepts
- Builds the Semantic Web through the sharing and reuse of data
- The Wiki way: collaborative and linked



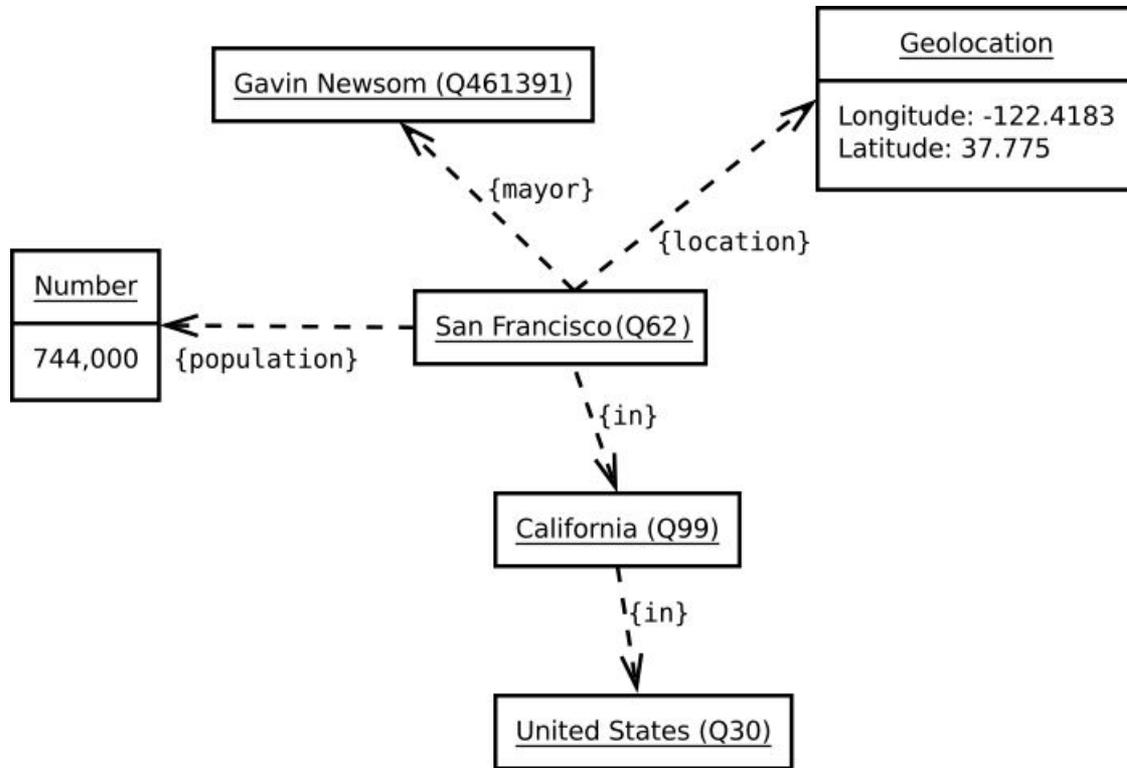
Structure of the data

- Q items: individual and randomised
- Users model the world in terms of “triples”
- Triple structure: items, properties and statements
- Additional detail added through qualifiers and references



Structure of the data

- Nested and linked structure
- Variety of data types



In a nutshell

- Ideal for structured data that can be expressed within this triple structure
- It is only the structure that is fixed; triples can be defined and edited by users to suit their view of the world
- It can be and is used for catalogs, authority files, controlled vocabularies and much more
- It is a software solution that offers Linked Open Data in a box, with a Mediawiki interface and a SPARQL Query Service to go with it

Wikibase in action



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National Libraries

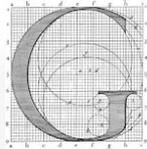
- German national library (DNB)
 - Project for Authority File (GND)
- French national library (BnF)
 - Two projects: Authority File (FNE) with ABES and cataloguing (NOEMI)



{ BnF | Bibliothèque
nationale de France

FactGrid

- Run by the Gotha Research Centre and hosted by the University of Erfurt
- Started out as a project to document the history of the Illuminati
- Now a collaborative historical database used by historians
- [Article on the project](#)



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Main Page



Welcome!

on the FactGrid database, a project of the Gotha Research Centre Germany operated by the data lab of the University of Erfurt. With the support of Wikimedia Germany we are using a MediaWiki with Wikidata's "wikibase" extension. Our main product are data which we collect on "items" such as these:

- [Adam Weishaupt](#)
- [Paris](#)

You will need to be logged in to see the "add statement" link with which you can add information in the form of triple based machine readable claims — which can now be explored with a data mining language, SPARQL, at our [SPARQL Endpoint](#). All FactGrid data are [CCO-licensed](#). You can download any search in various data formats with the aim to explore FactGrid data in other software environments or visualise searches with various tools on our site.

Visit our

- [FactGrid FAQ](#) for more information on why you might love to use FactGrid as your research platform
- [Help Section](#) for further assistance
- [Terms of Service](#) if you want to have an account on FactGrid
- [Project Section](#) to take a look at work done on the collective platform

The FactGrid database is an open collaborative and multilingual project provided by — as of August 2020 — [140 participants](#) from all over the world. If you are looking for a database might be a cool candidate. For more information and account details contact:

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mobile: +49-179-5196880
olaf.simons@pierre-marteau.com

Rhizome

- Rhizome is an arts organization based in New York
- Wikibase is used for their archive of born-digital art
- Flexibility of Wikibase means that it can accommodate the ever evolving field of net art
- [Article on the project](#)



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Shortcuts

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Getting started

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- [MediaWiki FAQ](#)
- [MediaWiki release mailing list](#)
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Wikibase Ecosystem



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Federation

Having “your own Wikidata” is only one part. Ideally it would be wonderful, if Wikibases could talk to each other, link content, query across instances, and re-use ontologies. All this can be called **Federation** or federated Wikibases.

... unfortunately, people mean very different things when they talk about federation.



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Federated querying: Already possible.

The SPARQL service can also include data retrieved from a limited number of external sources.

For example, the following query tries to find a value for `TOID` (`P3120`) from the UK Ordnance Survey for items that have a GSS code (2011) (`P836`) but no `TOID` (`P3120`):

```
SELECT ?item ?itemLabel ?gss ?os_toid WHERE {
  ?item p:P836 ?gss_stmt .
  ?gss_stmt ps:P836 ?gss .
  FILTER NOT EXISTS { ?gss_stmt pq:P582 [] } .
  FILTER NOT EXISTS { ?item wdt:P3120 [] } .

  SERVICE <http://data.ordnancesurvey.co.uk/datasets/os-linked-data/apis/sparql> {
    ?os_toid <http://data.ordnancesurvey.co.uk/ontology/admingeo/gssCode> ?gss
  }
  SERVICE wikibase:label { bd:serviceParam wikibase:language "en". }
}
```

Try it! [↗](#)

This is achieved by the section

```
SERVICE <http://data.ordnancesurvey.co.uk/datasets/os-linked-data/apis/sparql> {
  ...
}
```

Next step: Federated ontologies (Properties)

For 2020, the Wikibase development team will work on a solution that lets Wikibase instances re-use properties in Wikidata. We see this as a first step. Re-use of items is a possible future development.

Many details of this federated ontology re-use are subject to discussion and exploration.

Wikibase community

- A community around Wikibase is currently forming
- Discussions are active and open source
- Consider joining the community
- Monthly live sessions to explore topics together, the so-called “Wikibase Live Sessions”



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That's it from us.
Questions?



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Want to know more?

swe_partnerships@wikimedia.de



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