Wikipedia, Wikisource e Wikidata

How Wikimedia projects plan to manage the mass of information and how this information can be freely used
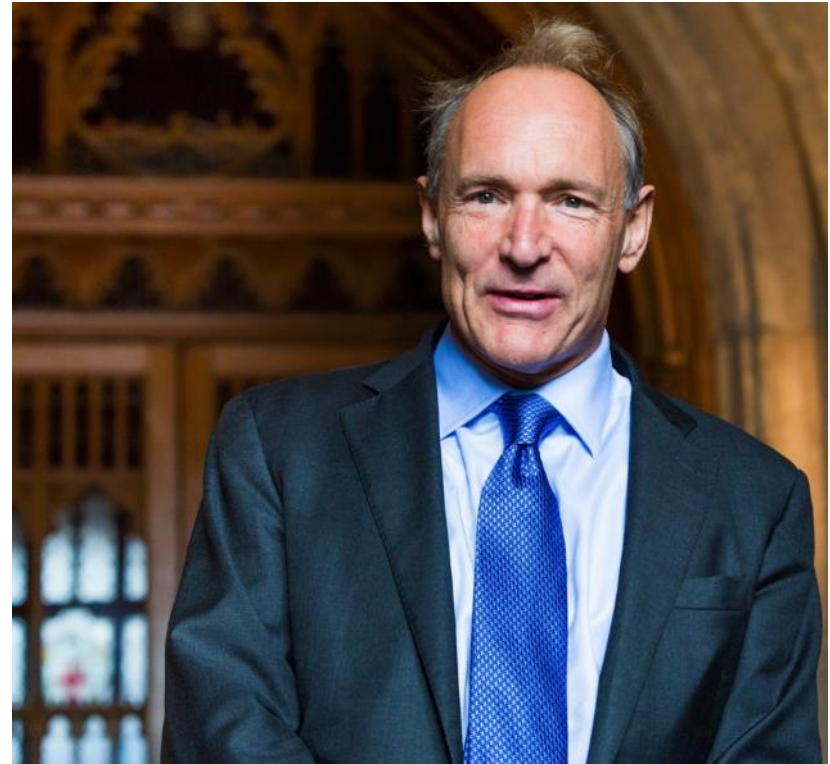
Web 3.0

Web semantico

Semantic Web

People keep asking what Web 3.0 is. I think maybe when you've got an overlay of scalable vector graphics – everything rippling and folding and looking misty – on Web 2.0 and access to a semantic Web integrated across a huge space of data, you'll have access to an unbelievable data resource...

Semantic web

Some items:

- *Usability web 2.0*

- *Access to data*

- *Huge space of data*

- *Semantic web*

People keep asking what Web 3.0 is. I think maybe when you've got an overlay of scalable vector graphics – everything rippling and folding and looking misty – on Web 2.0 and access to a semantic Web integrated across a huge space of data, you'll have access to an unbelievable data resource...

Semantic web

The Web was designed as an information space, with the goal that it should be useful not only for human-human communication, but also that machines would be able to participate and help.

One of the major obstacles to this has been the fact that most information on the Web is designed for human consumption, and even if it was derived from a database with well defined meanings (in at least some terms) for its columns, that the structure of the data is not evident to a robot browsing the Web.

Leaving aside the artificial intelligence problem of training machines to behave like people, the Semantic Web approach instead develops languages for expressing information in a machine process-able form
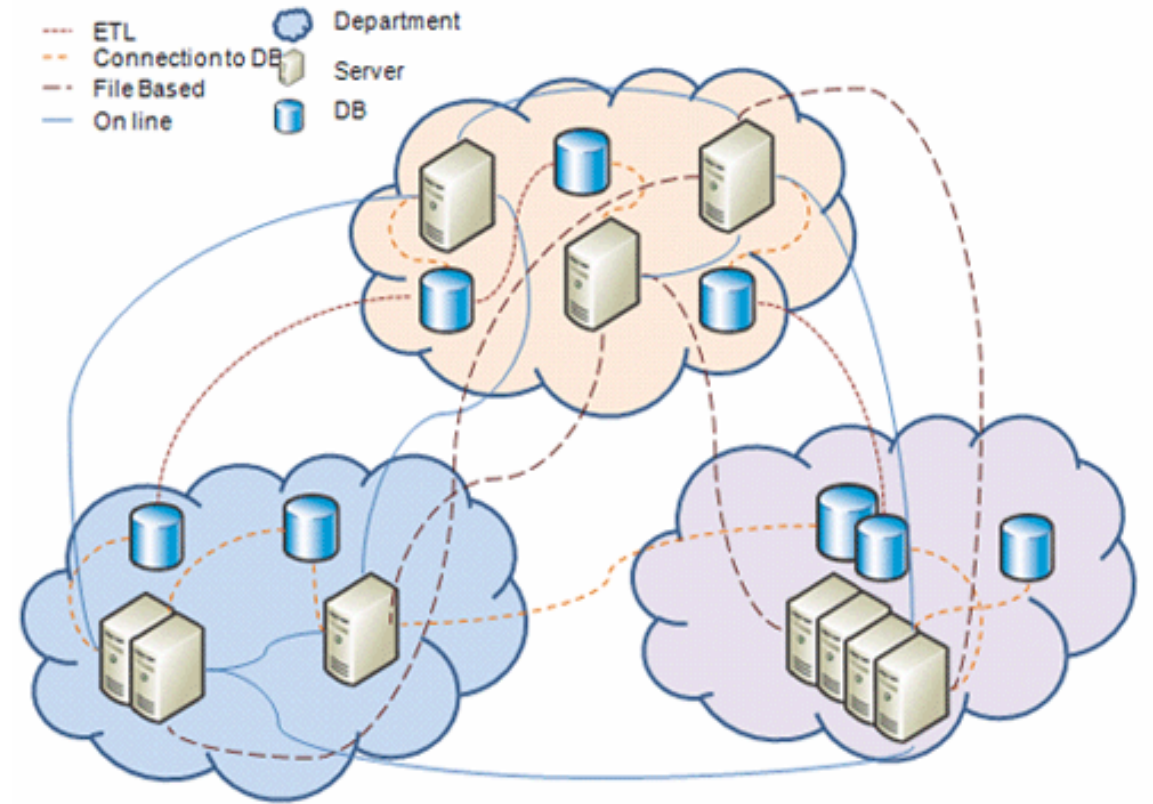
Semantic web

Why?

- Overload of information

- Stovepipe system (tubo della stufa): difference of schema

- Content Aggregation

Solutions?

- "Screen scraping" (raschiare lo schermo)

- "Data modelling"
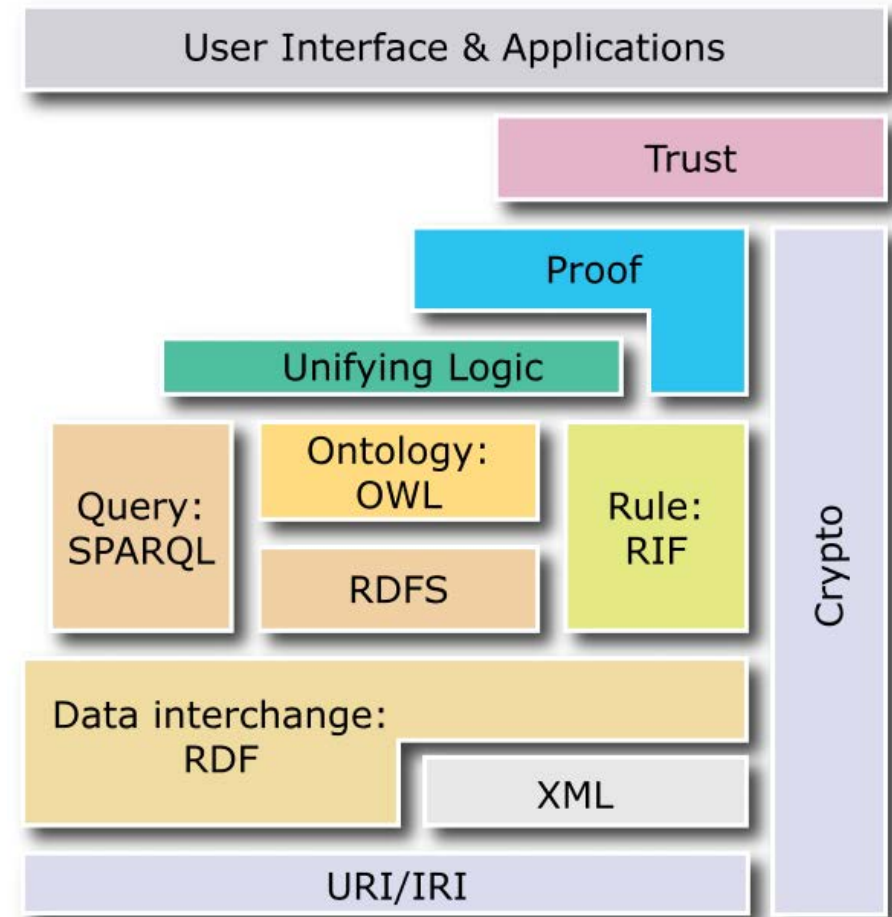
- ETL (Extract, transform, load)

Semantic web

A web of "intelligent" and "smart" data manageable by the machine.
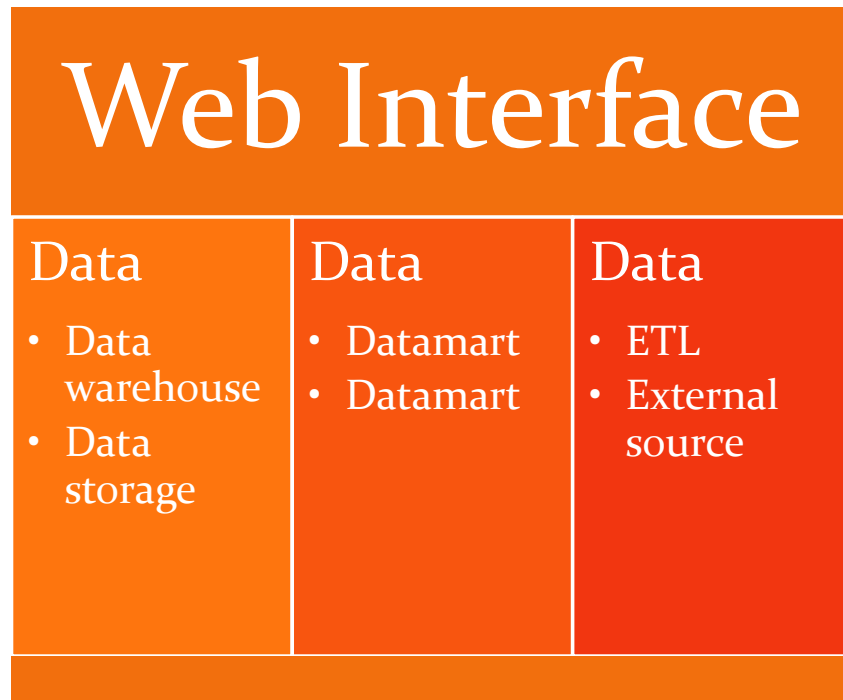
Basically:

- Unrelated to the application

- Modular

- Classified

- Part of a biggest "ecosystem" of information (ontology)

Semantic web

Web 1.0 and Web 2.0

Web Interface		
Data	**Data**	**Data**
• Data warehouse • Data storage	• Datamart • Datamart	• ETL • External source

Web 3.0

Data

Web services

Web Interface

Web services

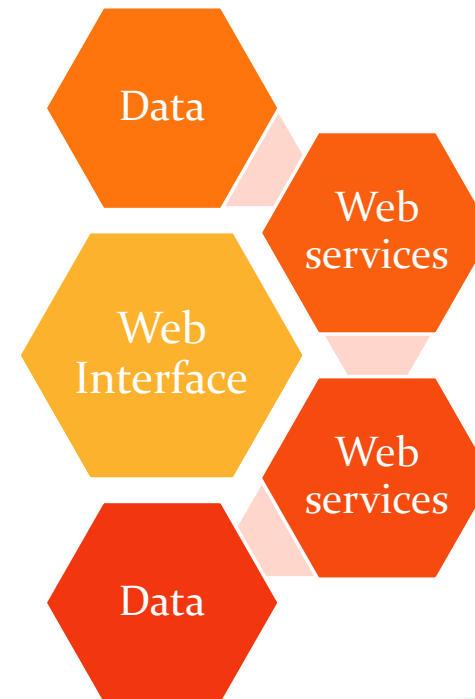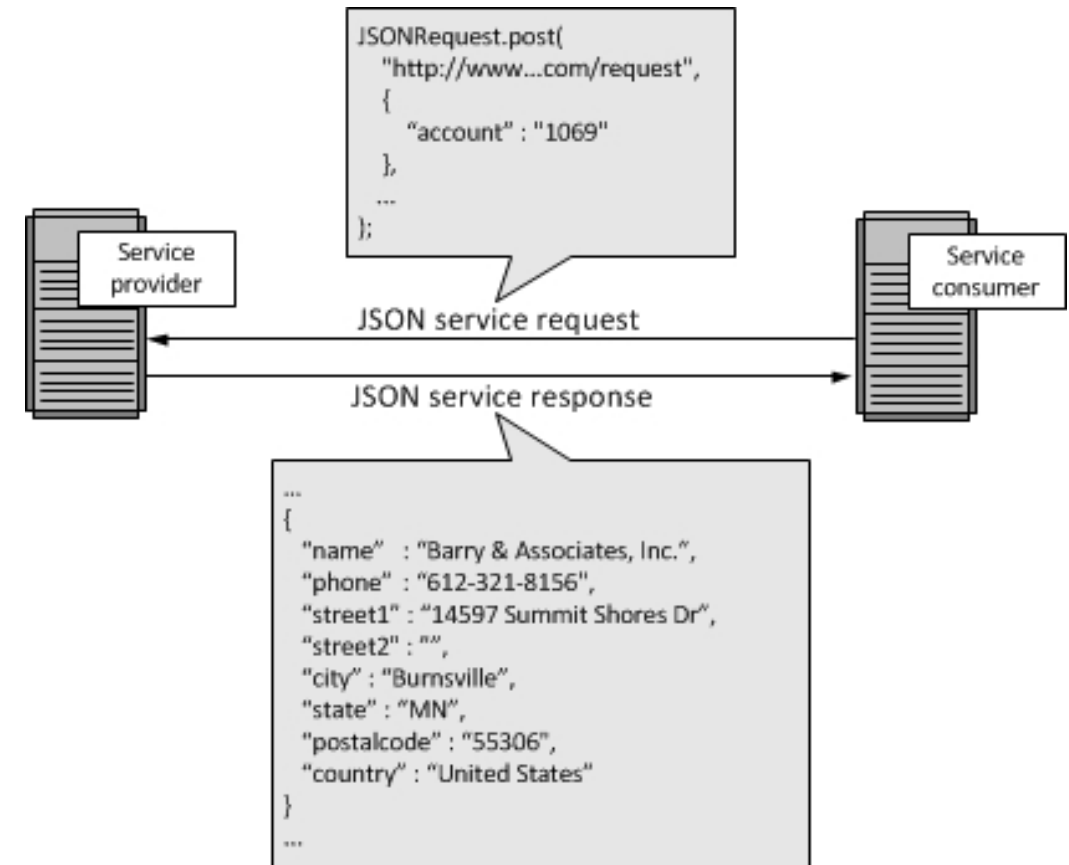Data

Semantic web

Easier solution

- Web services

- JSON

- API

News solutions

- NoSQL

- http://www.service-architecture.com/articles/web-services/web_services_explained.html
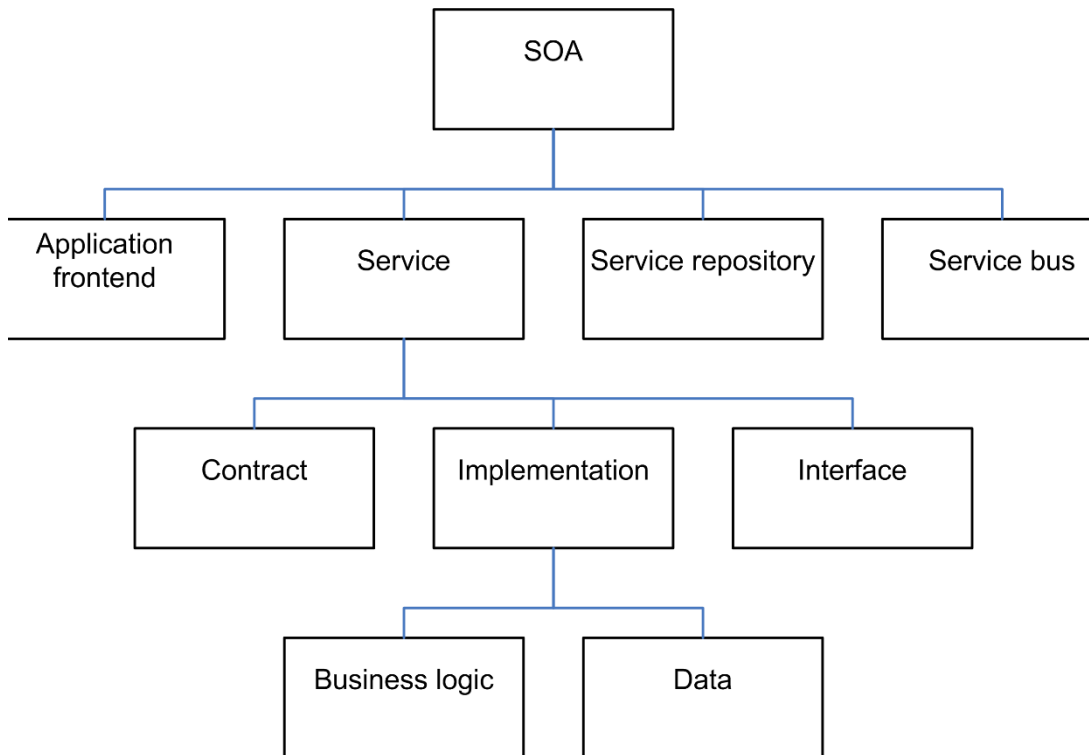
Web 3.0

Linked data

Linked Data

```
                    ┌──────────┐
                    │   SOA    │
                    └────┬─────┘
         ┌───────────────┼───────────────┬───────────────┐
  ┌──────┴──────┐ ┌──────┴──────┐ ┌──────┴──────┐ ┌──────┴──────┐
  │ Application │ │   Service   │ │   Service   │ │ Service bus │
  │  frontend   │ │             │ │ repository  │ │             │
  └─────────────┘ └──────┬──────┘ └─────────────┘ └─────────────┘
              ┌──────────┼──────────┐
       ┌──────┴───┐ ┌────┴─────────┐ ┌┴──────────┐
       │ Contract │ │Implementation│ │ Interface │
       └──────────┘ └──────┬───────┘ └───────────┘
                  ┌────────┴────────┐
           ┌──────┴──────┐   ┌──────┴──────┐
           │  Business   │   │    Data     │
           │    logic    │   │             │
           └─────────────┘   └─────────────┘
```

In a web where data are distributed geographically… the biggest problem is to organize them.
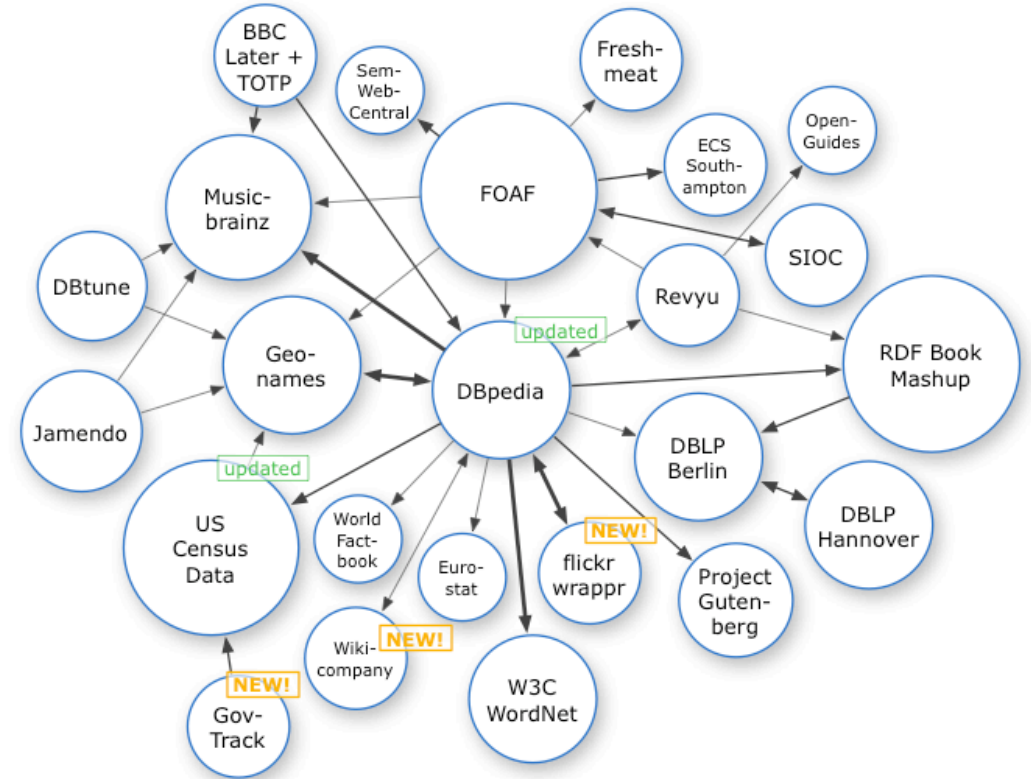
Linked data

Connect distributed data across the web.

Linking Open Data (LOD)

Tim Berners Lee (2009):

- Using URI to identify objects.

- Using HTTP URI to reference these objects and made them findable by users and machines.

- Providing useful information on the subject using standard formats such as RDF. (Metadati)

- Including links to other URIs related to the data presented to improve the search for other information on the Web.

Linked data

Some examples…

FOAF (Friend of a friend)

DBpedia…

```
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix foaf: <http://xmlns.com/foaf/0.1/> .

<#JW>
    a foaf:Person ;
    foaf:name "Jimmy Wales" ;
    foaf:mbox <mailto:jwales@bomis.com> ;
    foaf:homepage <http://www.jimmywales.com> ;
    foaf:nick "Jimbo" ;
    foaf:depiction <http://www.jimmywales.com/aus_img_small.jpg> ;
    foaf:interest <http://www.wikimedia.org> ;
    foaf:knows [
        a foaf:Person ;
        foaf:name "Angela Beesley"
    ] .

<http://www.wikimedia.org>
    rdfs:label "Wikimedia" .
```
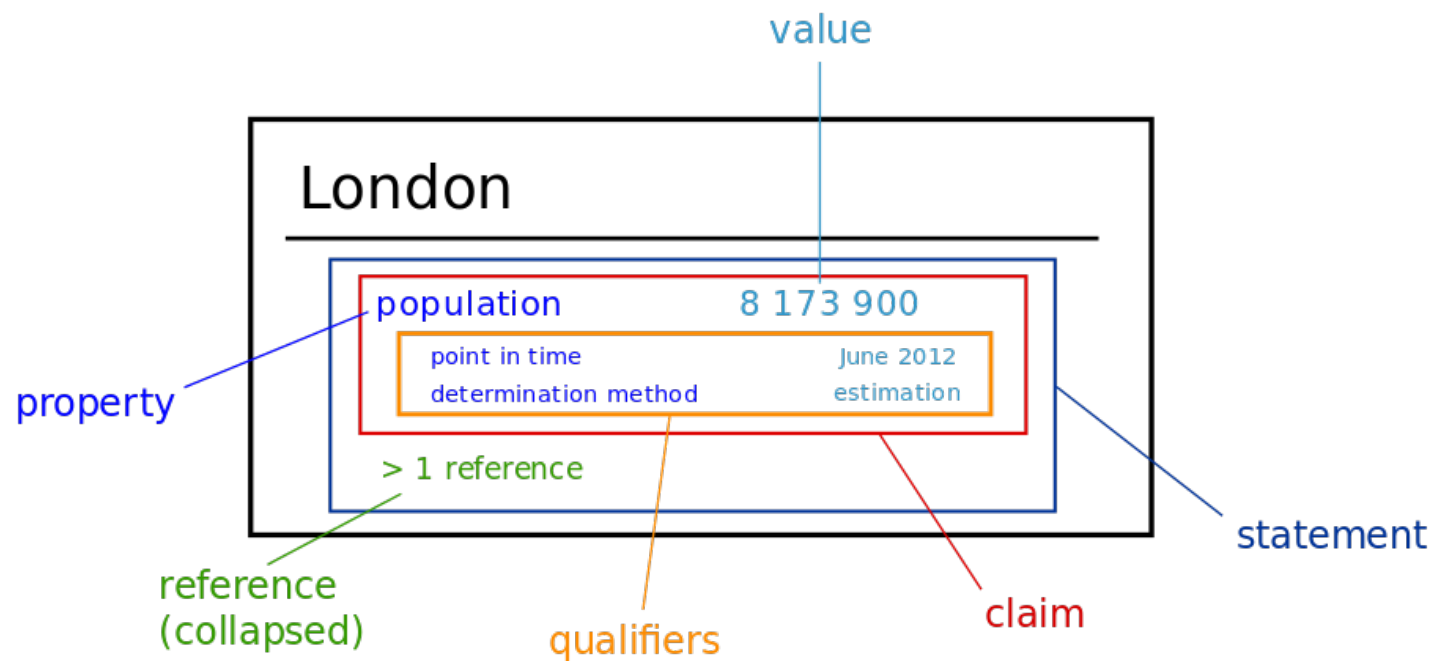
Web 3.0

Wikidata

Wikidata

Wikidata

- Esempio di pagina (Switzerland)

Wikidata

- Wikidata Query Service

- https://query.wikidata.org/

Wikidata

- Reasonator

- https://tools.wmflabs.org/reasonator/

Wikidata

- Che differenza c'è tra Dbpedia e Wikidata?

Basically they are doing the reverse of what we are doing. They are scraping data from Wikipedia infoboxes to make it accessible for machines. We make data available in structured form so it can be read by machines and put into Wikipedia infoboxes. They are working on incorporating some of Wikidata's data in their data. Their data is less nice than ours simply because the place they get it from (infoboxes) are not very nice - people put all kinds of non-machine readable data into them.

Wikidata

- Wikidata is growing faster...

- http://listen.hatnote.com

Grazie

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