

Web Annotation Data Model

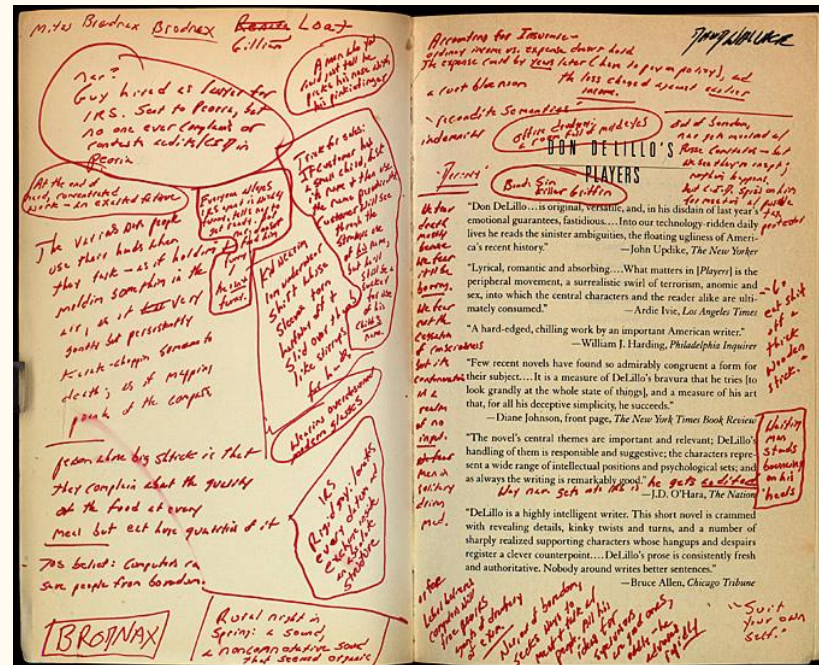
A W3C Recommendation for annotations

Annotation?

An association between distinct pieces of information.

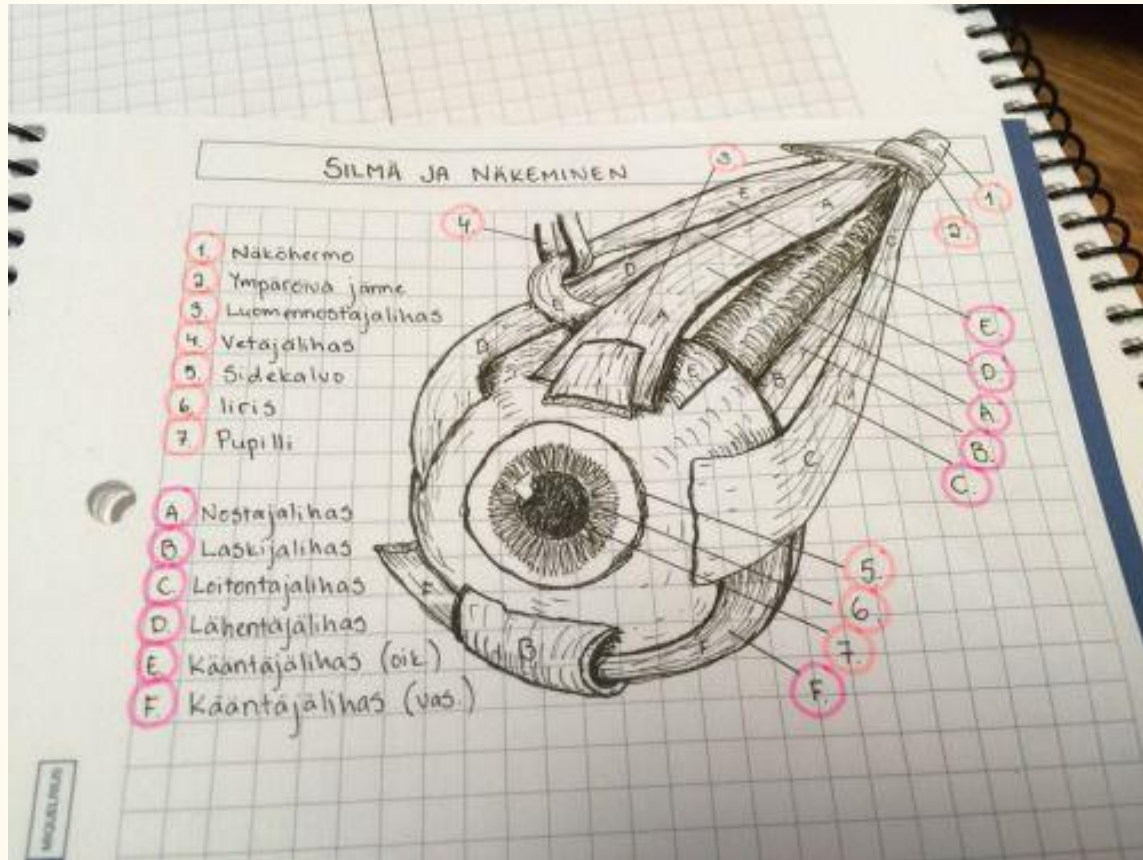
Very common human activity.

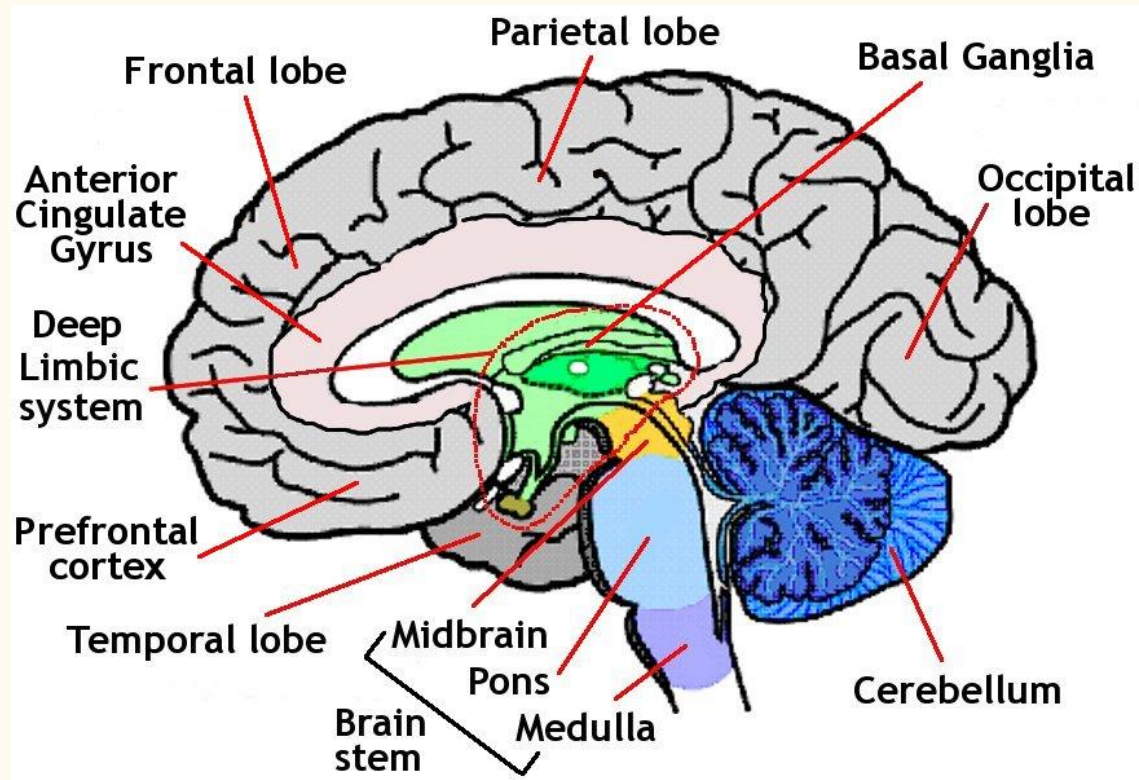
Examples



<https://chadashby.files.wordpress.com/2014/05/hihglighted-bible.jpg>

https://flavorwire.files.wordpress.com/2013/05/wallace_books_delillo_002_large.jpg





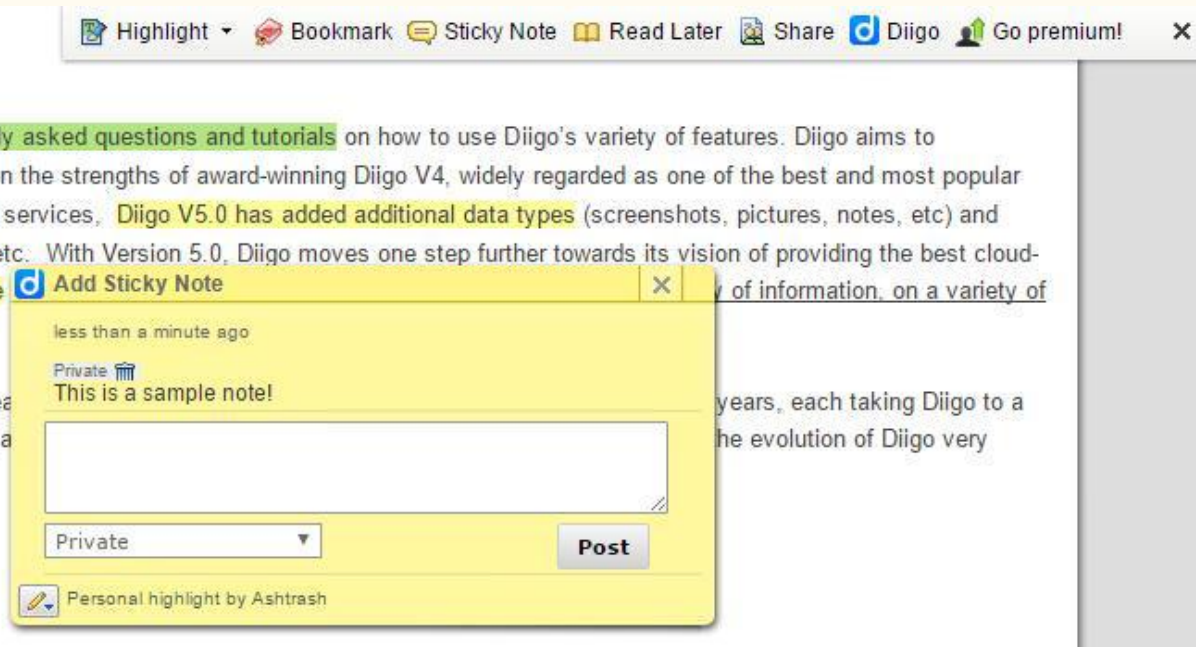
How about online?

Diigo: Your Learning, Simplified

Welcome to Diigo help, [find answers to your most frequently asked questions and tutorials](#) on how to use Diigo's variety of features. Diigo aims to dramatically improve your online productivity. Building upon the strengths of award-winning Diigo V4, widely regarded as one of the best and most popular social bookmarking, web annotation, collaborative research services, [Diigo V5.0 has added additional data types](#) (screenshots, pictures, notes, etc) and platform support, such as Chrome, Android, iPad, iPhone, etc. With Version 5.0, Diigo moves one step further towards its vision of providing the best cloud-based [personal information management \(PIM\) service](#) [of information, on a variety of devices](#).

Since Diigo started as a social bookmarking service four years ago, each taking Diigo to a new height in terms of enhancing productivity for collecting and organizing information succinctly:

years, each taking Diigo to a new height in terms of enhancing productivity for collecting and organizing information succinctly:



<http://media02.hongkiat.com/top-web-annotation-and-markup-tools/2.-diigo.jpg>

About us





“To enable a conversation over the world’s knowledge.”



We think simple tools can help us all improve the quality of information on the Internet and in the greater world around us.

Our team is building an open platform for discussion on the web. It leverages annotation to enable sentence-level critique or note-taking on top of news, blogs, scientific articles, books, terms of service, ballot initiatives, legislation and more. Everything we build is guided by our principles. In particular that it be free, open, non-profit, neutral and lasting to name a few.

We create software, push for standards, and foster community.

We are a non-profit organization, funded through the generosity of the Knight, Mellon, Shuttleworth, Sloan, Helmsley, and Omidyar Foundations– and through the support of hundreds of individuals like yourself that want to see this idea come to fruition. You can view our tax returns here.


>  Grp1   

Share

Share the link below to show anyone these annotations and invite them to contribute their own.


<https://via.hypothes.is/https://hypothes.is/about/>



2





Show all annotations (4)

ashtrash 1 min

 Grp1




About us

Sample comment or note.





   

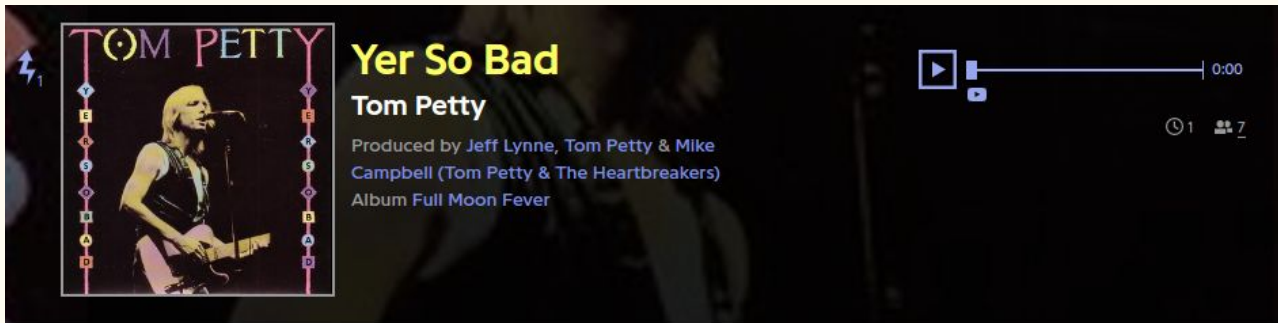
2

ashtrash 1 min

 Grp1  

conversation over the world's knowledge



YER SO BAD LYRICS

My sister got lucky, married a yuppie
Took him for all he was worth
Now she's a swinger dating a singer
I can't decide which is worse

But not me baby, I've got you to save me
Oh yer so bad, best thing I ever had
In a world gone mad, yer so bad

My sister's ex-husband can't get no lovin'
Walks around dog-faced and hurt
Now he's got nothin', head in the oven
I can't decide which is worse



Genius Annotation [2 contributors](#)

Sticking your [head in an oven](#) and dying from gas asphyxiation was once a very common way to commit suicide. [Sylvia Plath](#) even killed herself using this method.

Today, with the advent of electric stoves and less powerful forms of natural gas the technique has fallen out of favor.



Codex Buranus

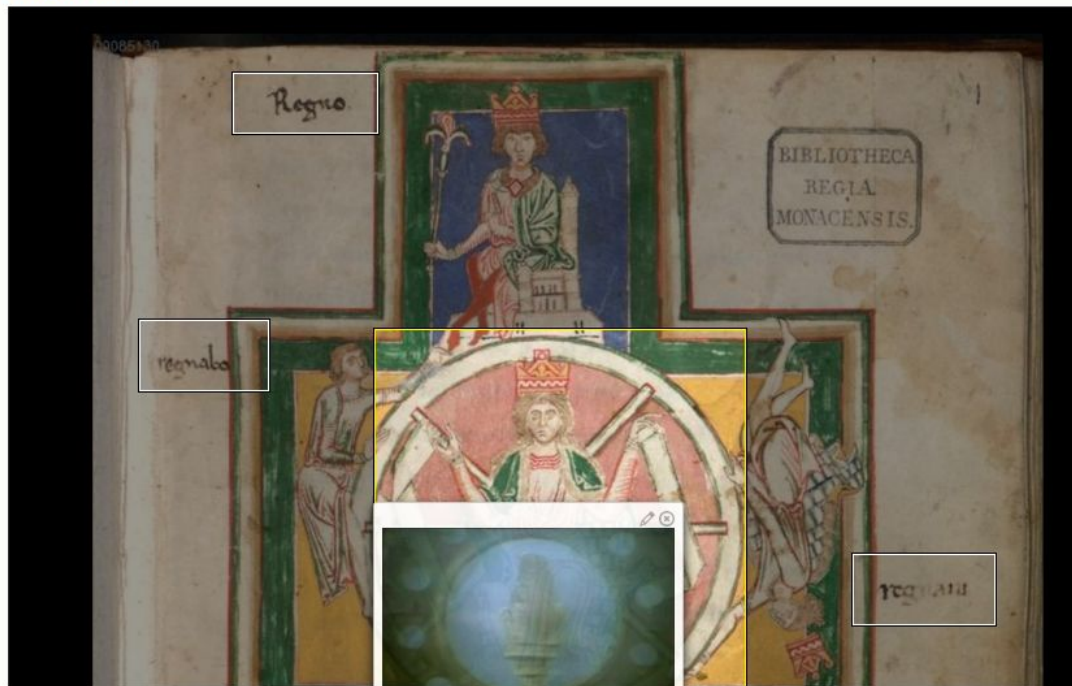


Image info: 第1曲 [I] O Fortuna, velut luna (1r)

[Show JSON-LD](#) [Hide Annotation](#) [Show Anno List](#) ☐ all

Document info (web annotation):

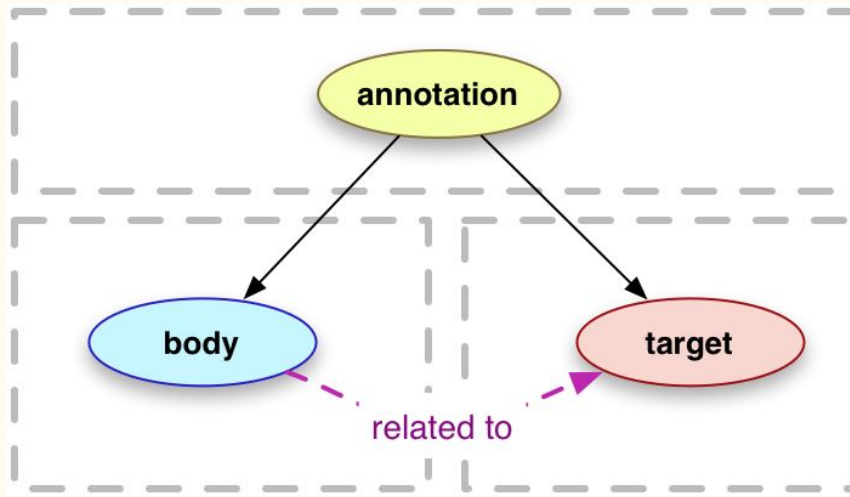
- License: [CC BY-NC-SA \(see individual page\)](#)
- See also: [Bayerische Staatsbibliothek München, Carmina Burana - BSB Clm 4660](#)
[カルミナ・ブラーナー 中世写本の詩歌集から](#)

1 / 22 (4 29 annots)



Web Annotation Data Model?

- A W3C recommended model for annotations
 - <https://www.w3.org/TR/annotation-model/>
 - Extensible
 - Interoperable
 - Easily shared between platforms
 - Serialized with JSON-LD
(<https://www.w3.org/TR/json-ld/>)



Annotations define **relationships** between resources.

Body related to Target

0 or more **bodies**

1 or more **targets**

Term	Description
@context	≥ 1 & includes http://www.w3.org/ns/anno.jsonld
id	exactly 1 IRI that identifies it.
type	> 1 & Annotation class must be one of them.
Annotation	The class for Web Annotations.
body	Should ≥ 1 body , but there may be 0.
target	must ≥ 1 or more

Let's unpack it a bit

Target always an External Web Resource

Body may also be embedded or external

<https://www.w3.org/ns/anno.jsonld>

```
{ "@context": {  
  "oa":      "http://www.w3.org/ns/oa#",  
  "dc":      "http://purl.org/dc/elements/1.1/",  
  "dcterms": "http://purl.org/dc/terms/",  
  "dctypes": "http://purl.org/dc/dcmitype/",  
  "foaf":    "http://xmlns.com/foaf/0.1/",  
  "rdf":     "http://www.w3.org/1999/02/22-rdf-syntax-ns#",  
  "rdfs":    "http://www.w3.org/2000/01/rdf-schema#",  
  "skos":    "http://www.w3.org/2004/02/skos/core#",
```

"Annotation":	"oa:Annotation",
"Dataset":	"dctypes:Dataset",
"Image":	"dctypes:StillImage",
"Video":	"dctypes:MovingImage",
"Audio":	"dctypes:Sound",
"Text":	"dctypes:Text",
"TextualBody":	"oa:TextualBody",
"ResourceSelection":	"oa:ResourceSelection",
"SpecificResource":	"oa:SpecificResource",

Selection

"FragmentSelector":	"oa:FragmentSelector",
"CssSelector":	"oa:CssSelector",
"XPathSelector":	"oa:XPathSelector",
"TextQuoteSelector":	"oa:TextQuoteSelector",
"TextPositionSelector":	"oa:TextPositionSelector",
"DataPositionSelector":	"oa:DataPositionSelector",
"SvgSelector":	"oa:SvgSelector",
"RangeSelector":	"oa:RangeSelector",

motivation

"Motivation": "oa:Motivation",
"bookmarking": "oa:bookmarking",
"classifying": "oa:classifying",
"commenting": "oa:commenting",
"describing": "oa:describing",
"editing": "oa:editing",
"highlighting": "oa:highlighting",

"identifying": "oa:identifying",
"linking": "oa:linking",
"moderating": "oa:moderating",
"questioning": "oa:questioning",
"replying": "oa:replying",
"reviewing": "oa:reviewing",
"tagging": "oa:tagging",

Simple example

```
{  
  "@context": "http://www.w3.org/ns/anno.jsonld",  
  "id": "http://example.org/anno1",  
  "type": "Annotation",  
  "body": "http://example.org/post1",  
  "target": "http://example.com/page1"  
}
```

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno2",
  "type": "Annotation",
  "body": {
    "id": "http://example.org/analysis1.mp3",
    "format": "audio/mpeg",
    "language": "fr"},
  "target": {
    "id": "http://example.gov/patent1.pdf",
    "format": "application/pdf",
    "language": ["en", "ar"],
    "textDirection": "ltr",
    "processingLanguage": "en"
  }
}
```

<https://www.w3.org/International/articles/language-tags/>

<https://www.w3.org/TR/annotation-model/#bib-iana-media-types>

```
{  
  "@context": "http://www.w3.org/ns/anno.jsonld",  
  "id": "http://example.org/anno4",  
  "type": "Annotation",  
  "body": "http://example.org/description1",  
  "target": {  
    "id": "http://example.com/image1#xywh=100,100,300,300",  
    "type": "Image",  
    "format": "image/jpeg"  
  }  
}
```



IRI with fragment

```
{
  "@context": "http://www.w3.org/ns/anno.jsonld",
  "id": "http://example.org/anno5",
  "type": "Annotation",
  "body": {
    "type" : "TextualBody",
    "value" : "<p>j'adore !</p>",
    "format" : "text/html",
    "language" : "fr"
  },
  "target": "http://example.org/photo1"
}
```

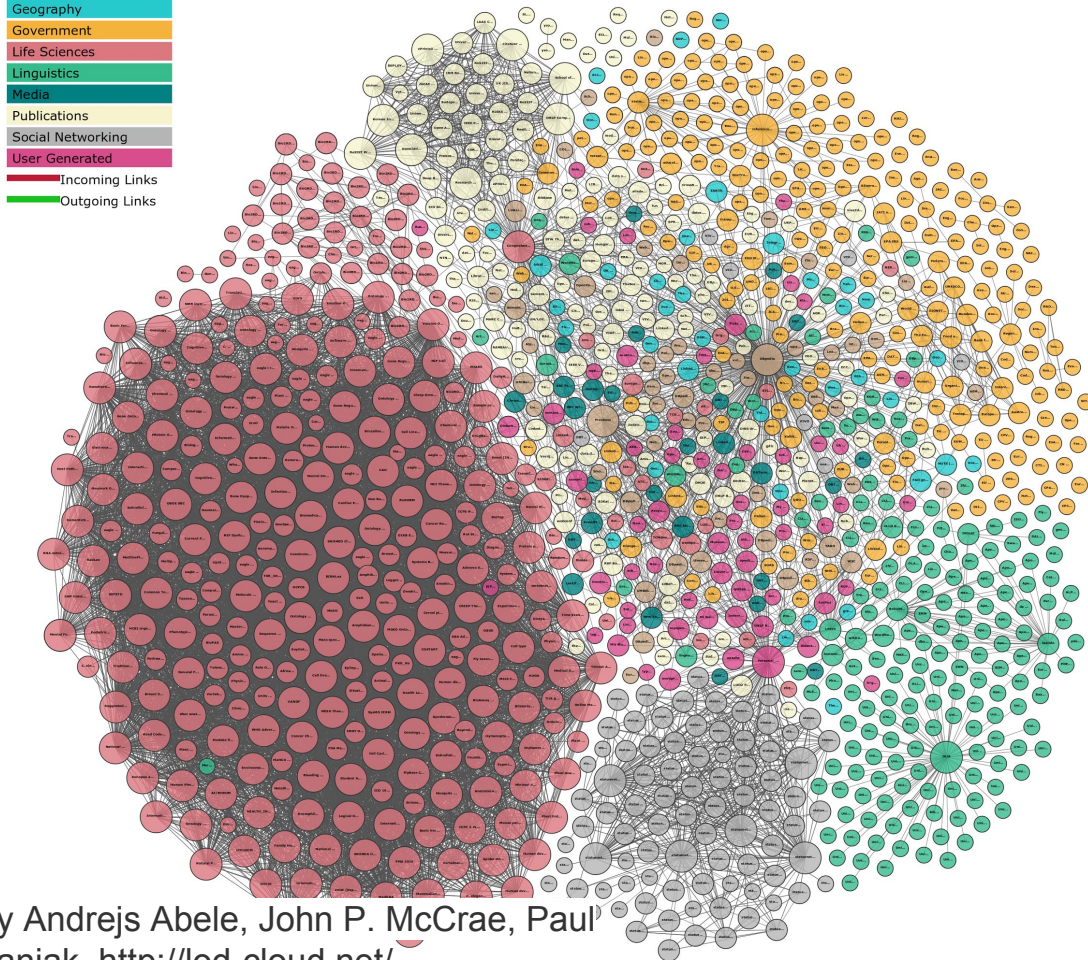
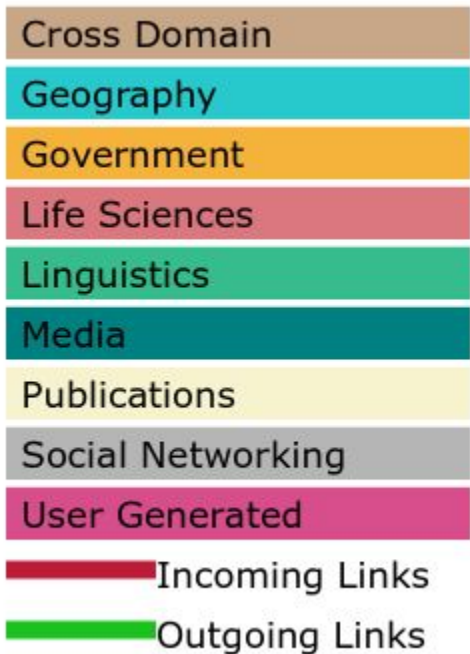
```
{ "@context": "http://www.w3.org/ns/anno.jsonld",  
  "id": "http://example.org/anno9",  
  "type": "Annotation",  
  "body": [  
    "http://example.org/description1",  
    {  
      "type": "TextualBody",  
      "value": "tag1"  
    }  
  ],  
  "target": [  
    "http://example.org/image1",  
    "http://example.org/image2"  
  ]  
}
```

Multiple targets

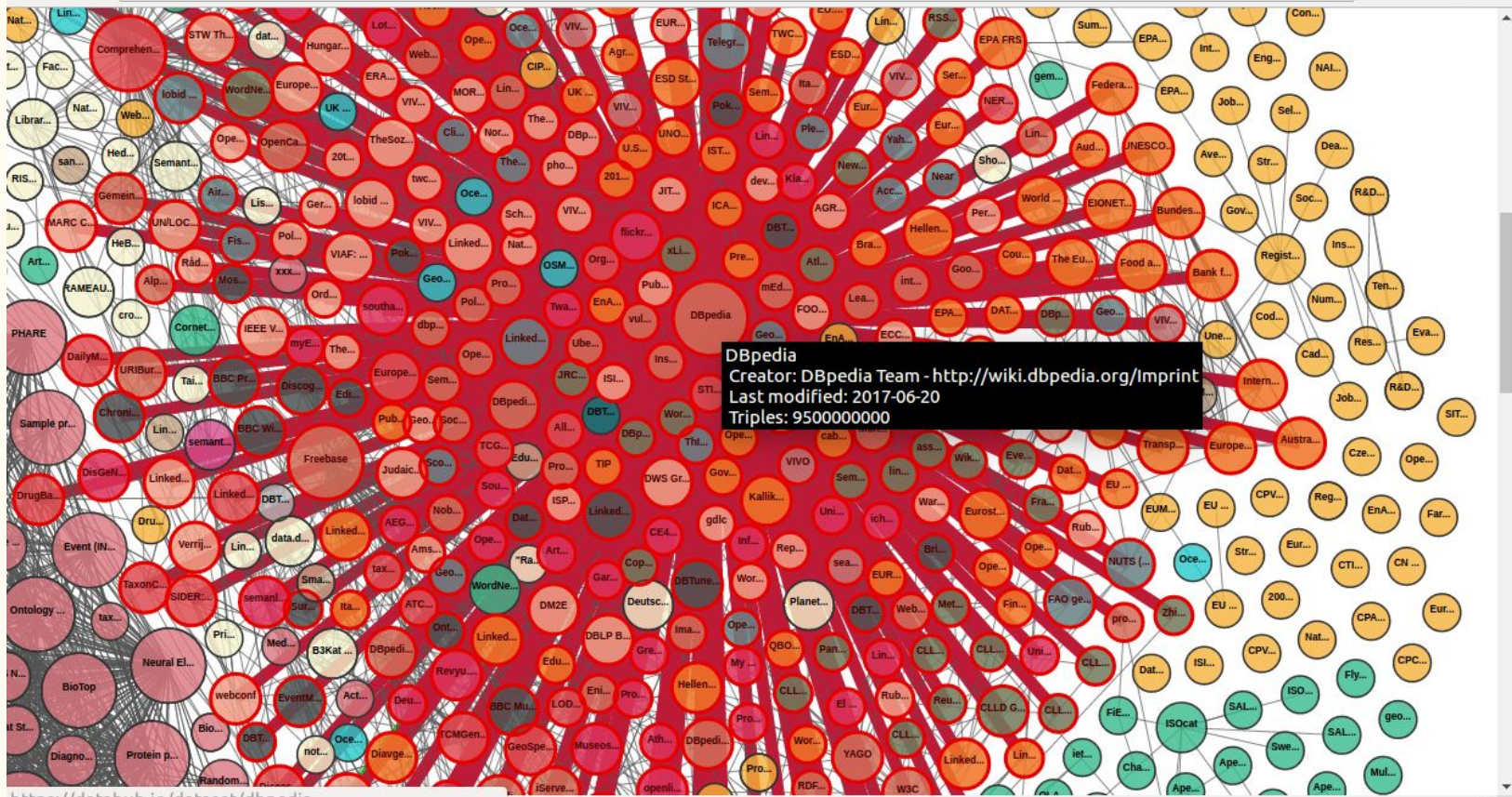

```
{ "@context": "http://www.w3.org/ns/anno.jsonld",  
  "id": "http://example.org/anno10",  
  "type": "Annotation",  
  "body": {  
    "type": "Choice",  
    "items": [  
      { "id": "http://example.org/note1",  
        "Language": "en"},  
      { "id": "http://example.org/note2",  
        "language": "fr"}]  
    },  
  "target": "http://example.org/website1"  
}
```

Resource Choice

Semantic Resour



Linking Open Data cloud diagram 2017, by Andrejs Abele, John P. McCrae, Paul Buitelaar, Anja Jentzsch and Richard Cyganiak. <http://lod-cloud.net/>



<https://datahub.io/dataset/dbpedia>

annotation-....png ^

SHOW ALL x

SPARQL:

```
PREFIX owl: <http://www.w3.org/2002/07/owl#>
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
PREFIX : <http://dbpedia.org/resource/>
PREFIX dbpedia2: <http://dbpedia.org/property/>
PREFIX dbpedia: <http://dbpedia.org/>
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
```

```
SELECT distinct ?soccerplayer ?countryOfBirth ?team ?countryOfTeam ?stadiumcapacity
{
  ?soccerplayer a dbo:SoccerPlayer ;
    dbo:position|dbp:position <http://dbpedia.org/resource/Goalkeeper_(association_football)> ;
    dbo:birthPlace/dbo:country* ?countryOfBirth ;
    #dbo:number 13 ;
    dbo:team ?team .
    ?team dbo:capacity ?stadiumcapacity ; dbo:ground ?countryOfTeam .
    ?countryOfBirth a dbo:Country ; dbo:populationTotal ?population .
}
```

Results:

<http://dbpedia.org/snorql/>

SELECT ?node ?name

WHERE{

?node <http://xmlns.com/foaf/0.1/givenname> ?name .





















?node <http://www.w3.org/1999/02/22-rdf-syntax-ns#type>

<http://xmlns.com/foaf/0.1/Person> .

}

LIMIT 10

SPARQL results:

soccerplayer	countryOfBirth	team	countryOfTeam	stadiumcapacity
:Abdesslam_Benabdellah 	:Algeria 	:Wydad_Casablanca 	:Morocco 	67000
:Airton_Moraes_Michellon 	:Brazil 	:FC_Red_Bull_Salzburg 	:Austria 	31000
:Alain_Gouaméné 	:Ivory_Coast 	:Raja_Casablanca 	:Morocco 	67000
:Allan_McGregor 	:United_Kingdom 	:Beşiktaş_J.K. 	:Turkey 	41903
:Anthony_Scribe 	:France 	:FC_Dinamo_Thilisi 	:Georgia (country) 	54549