

# Linked Data Browser

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# Gliederung

1. **Aufgabenbeschreibung**
2. **Motivation**
3. **Architektur LDB**
4. **Live Demo**
5. **Evaluation**
6. **Fragen und Antworten**

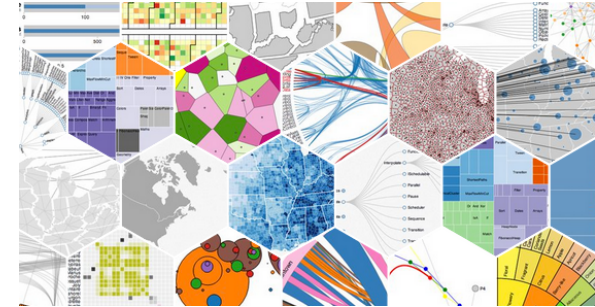
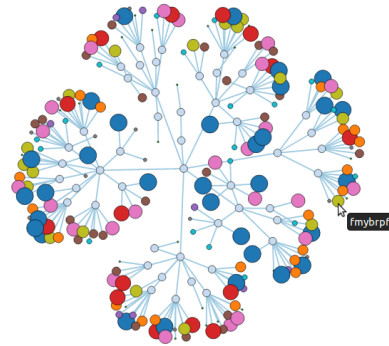
# 1. Aufgabenbeschreibung

- **Browser zum einfachen Zugang zu RDF Daten**
- **Datenaufbereitung in natürlicher Art und Weise → Bsp: Triple2NL**
- **Navigation durch RDF Graph**
- **Nutzung verschiedener SparqlEndpoints ermöglichen**

# 2. Motivation

Wie können wir eine graphbasierte Datenquelle verständlich visualisieren?

- Knoten-Kanten Grafik (z.B. d3)



- Tabellarisch (SPARQL)

Virtuoso SPARQL Query Editor

Default Data Set Name (Graph ID):  Sie befinden sich im Vollbildmodus. Vollbildmodus beenden (F11)

Query Text:

```
select distinct Concept where (C1 is Concept) LIMIT 100
```

Results Format:  (The XML output is disabled. See #4666)

Execution Timeout:  milliseconds (value less than 1000 are ignored)

Options: ☐ Select checking of user variables

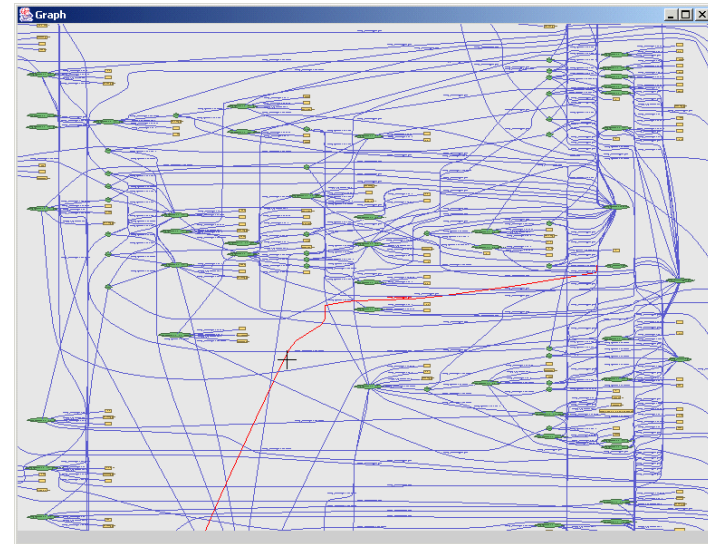
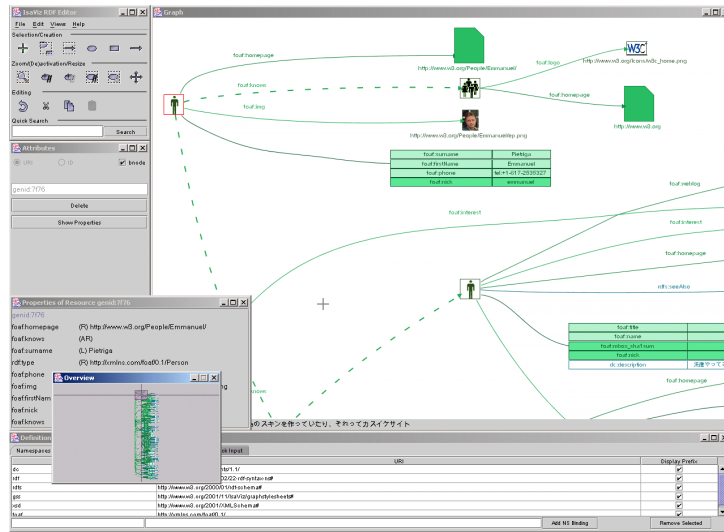
Copyright © 2013 OpenLink Software  
Virtuoso version 6.0.0.20130404 (64-bit) build 20130404, single license edition

Concept
<a href="http://www.w3.org/2004/02/skos/core#Concept">http://www.w3.org/2004/02/skos/core#Concept</a>
<a href="http://xmlns.com/foaf/0.1/Person">http://xmlns.com/foaf/0.1/Person</a>
<a href="http://schema.org/Person">http://schema.org/Person</a>
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<a href="http://www.w3.org/2002-07/owl#Thing">http://www.w3.org/2002-07/owl#Thing</a>
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<a href="http://dbpedia.org/ontology/Person">http://dbpedia.org/ontology/Person</a>
<a href="http://dbpedia.org/ontology/TennisPlayer">http://dbpedia.org/ontology/TennisPlayer</a>
<a href="http://schema.org/CreativeWork">http://schema.org/CreativeWork</a>
<a href="http://www.ontologydesignpatterns.org/ont/dul/DUL.owl#InformationEntity">http://www.ontologydesignpatterns.org/ont/dul/DUL.owl#InformationEntity</a>
<a href="http://dbpedia.org/ontology/Software">http://dbpedia.org/ontology/Software</a>

# IsaVis

**IsaViz is a visual environment for browsing and authoring RDF models represented as graphs. It features:**

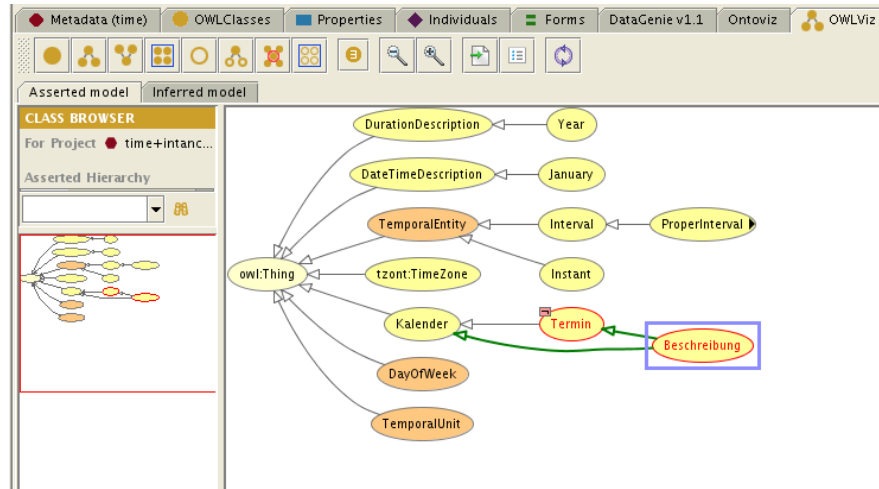
- a 2.5D user interface allowing smooth zooming and navigation in the graph
- creation and editing of graphs by drawing ellipses, boxes and arcs
- RDF/XML, Notation 3 and N-Triple import
- RDF/XML, Notation 3 and N-Triple export, but also SVG and PNG export



# Protegé

**“A free, open-source ontology editor and framework for building intelligent systems”**

- Grafische Darstellung von RDF-Tripeln wird natürlicherweise benötigt, wenn Ontologien verwaltet werden sollen
- Oftmals graphenbasierter Zugang für Experten unproblematisch



## About: Mariah Carey

An Entity of Type : [agent](#), from Named Graph : <http://dbpedia.org>, within Data Space : [dbpedia.org](#)

Mariah Carey (\* 27. März 1970 in Huntington, Long Island, New York) ist eine US-amerikanische Pop-, Hip-Hop- und R&B-Sängerin, Songschreiberin, Produzentin und Schauspielerin. Mit 18 Nummer-eins-Hits in den USA, fünf Grammys und mehr als 200 Millionen verkauften Tonträgern zählt sie zu den erfolgreichsten Sängerinnen der Gegenwart. Bei den World Music Awards im Jahr 2000 wurde Mariah Carey mit dem „Millennium Award“ als Künstlerin mit den meisten Verkäufen in den 1990er Jahren ausgezeichnet.

Property	Value
<a href="#">dbpedia-owl:abstract</a>	<ul style="list-style-type: none"> <li>■ Mariah Carey (born March 27, 1969 or 1970) is an American singer-songwriter, actress, record producer, and philanthropist. Born and raised on Long Island, New York, Carey came to prominence after releasing her self-titled debut studio album Mariah Carey in 1990; it went multiplatinum and spawned four consecutive number one singles on the U.S. Billboard Hot 100 chart. Under the guidance of Columbia Records executive and later husband Tommy Mottola, she continued booking success with followup albums Emotions (1991), Music Box (1993), and Merry Christmas (1994). Carey was established as Columbia's highest-selling act. Daydream (1995) made music history when its second single "One Sweet Day", a duet with Boyz II Men, spent a record sixteen weeks on top of the Billboard Hot 100, and remains the longest-running number-one song in U.S. chart history. During the recording of the album, Carey began to deviate from her R&amp;B and pop beginnings and slowly traversed into hip hop. This musical change became evident with the release of Butterfly (1997), at which time Carey had separated from Mottola. Carey left Columbia in 2000, and signed a \$100 million recording contract with Virgin Records. Before the release of her first feature film Glitter (2001), she suffered a physical and emotional breakdown and was hospitalized for severe exhaustion. Following the film's poor reception, she was bought out of her recording contract for \$50 million, which led to a decline in her career. She signed a multimillion dollar contract deal with Island Records in 2002, and after an unsuccessful period, returned to the top of music charts with The Emancipation of Mimi (2005). Its second single "We Belong Together" became her most successful single of the 2000s, and was later named "Song of the Decade" by Billboard. Carey once again ventured into film with a well-received supporting role in Precious (2009); she was awarded the "Breakthrough Performance Award" at the Palm Springs International Film Festival, and Black Reel and NAACP Image Award nominations. In a career spanning over two decades, Carey has sold more than 200 million records worldwide, making her one of the best-selling music artists of all time. In 1998, she was honored as the world's best-selling recording artist of the 1990s at the World Music Awards. Carey was also named the best-selling female artist of the millennium in 2000. According to the Recording Industry Association of America, she is the third-best-selling female artist in the United States, with 63.5 million certified albums. With the release of "Touch My Body" (2008), Carey gained her 18th number-one single in the United States, more than any other solo artist. In 2012, Carey was ranked second on VH1's list of the "100 Greatest Women in Music". Aside from her commercial accomplishments, Carey has won five Grammy Awards, 17 World Music Awards, 11 American Music Awards, and 31 Billboard Music Awards. Referred to as the "songbird supreme" by the Guinness World Records, she is famed for her five-octave vocal range, power, melismatic style and signature use of the whistle register.</li> <li>■ Mariah Carey (* 27. März 1970 in Huntington, Long Island, New York) ist eine US-amerikanische Pop-, Hip-Hop- und R&amp;B-Sängerin, Songschreiberin, Produzentin und Schauspielerin. Mit 18 Nummer-eins-Hits in den USA, fünf Grammys und mehr als 200 Millionen verkauften Tonträgern zählt sie zu den erfolgreichsten Sängerinnen der Gegenwart. Bei den World Music Awards im Jahr 2000 wurde Mariah Carey mit dem „Millennium Award“ als Künstlerin mit den meisten Verkäufen in den 1990er Jahren ausgezeichnet. Carey wurde 2003 bei den World Music Awards mit dem Chopard Diamond Award für über 100 Millionen verkauften Alben ausgezeichnet. Laut der Recording Industry Association of America ist Mariah Carey mit über 63 Million verkauften Alben die dritterfolgreichste Künstlerin in den USA. Das U.S. Nielsen SoundScan erklärte Mariah Carey zur erfolgreichsten Künstlerin in den USA. 2008 zeichnete das Billboard-Magazin Carey als erfolgreichste Künstlerin in</li> </ul>

# Mariah Carey

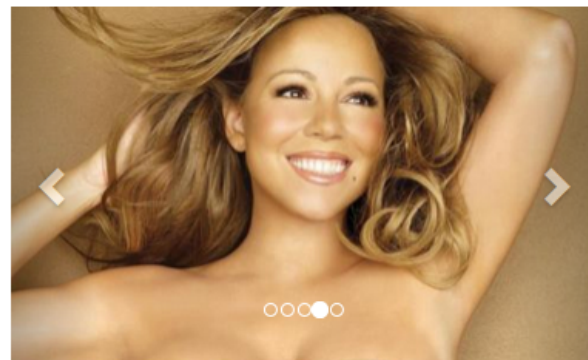
## Abstract

[Mariah Carey](#) (born March 27, 1969 or 1970) is an American singer-songwriter, actress, record producer, and philanthropist. Born and raised on [Long Island, New York](#), [Carey](#) came to prominence after releasing her self-titled debut studio album [Mariah Carey](#) in 1990; it went multiplatinum and spawned four consecutive number one singles on the [U.S. Billboard Hot 100](#) chart.

## Description

[Mariah Carey](#) is a natural person, an agent, a body, a physical entity 100001930, an entity, a person, a musical performer, a yago legal actor geo and a person with occupation as well as an artist, whose's viaf id is "49411392", whose's active years start year is 31 December 1987, whose's occupation is [Mariah Carey](#) 1, whose's network is 5.0E8 us dollars, whose's birth year is 31 December 1968, whose's birth place is [Huntington, New York](#), whose's residence is [New York](#), whose's locn id is "n/91/112415", whose's birth date is 26 March 1969, whose's residence is [New York City](#) and whose's birth place is [New York](#).

## Picture



## Youtube





# 2. Architektur

## Ansatz:

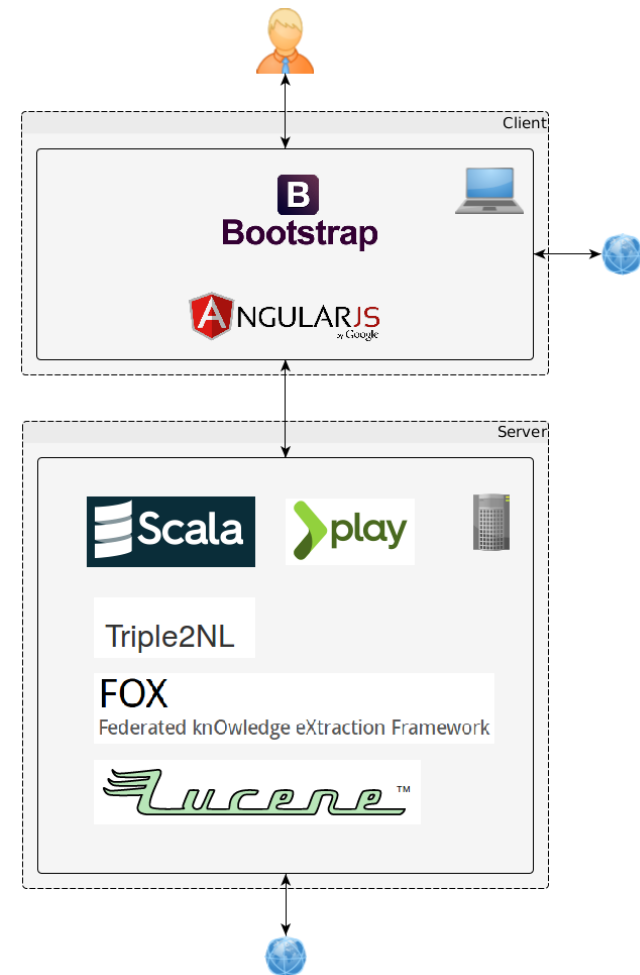
- Rich Client Application
- Entkopplung unter der Nutzung von RESTful Services
- Single Page Web App

## Client:

- angular.js / angular-dashboard-framework
- bootstrap3

## Server

- Scala / Play Anwendung
- Nutzung von AKSW Bibliotheken (Fox, Triple2NI)



# 3. Live DEMO

Linked Open Data Browser

Search for keyword or URI

Germany

Linked Open Data Browser

Search for keyword or URI

DBpedia

Linked Open Data Browser

Search for keyword or URI

Leipzig University

Abstract

Leipzig University (German: Universität Leipzig), located in Leipzig in the Free State of Saxony, Germany, is one of the oldest universities in the world and the second-oldest university (by consecutive years of existence) in Germany.

Description

Leipzig University is an educational organization, an entity, a spatial thing, a social person and a college or university as well as an agent, whose's motto is "Aus Tradition Grenzen überschreiten - Crossing Boundaries out of Tradition", whose's country is [Germany](#), whose's number of student is 28125, whose's rector is [Beate Schlücking](#), whose founds date 01 December 1409, whose's staff is 3246, whose's state is [Saxony](#), whose's city is [Leipzig](#) and whose's type is Public university.

Geographic Information



Picture



extract structured content from the structured information is then made  
query relationships and properties  
er related datasets. DBpedia has been parts of the decentralized Linked Data

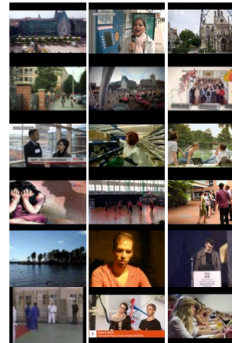
information entity and an entity as well  
ity, whose's programming language is  
rogramming language is Virtuoso  
License, whose's developer is Free  
ie's genre is Linked data, whose's release  
DBpedia 3.9" and whose's developer is

Picture



Youtube

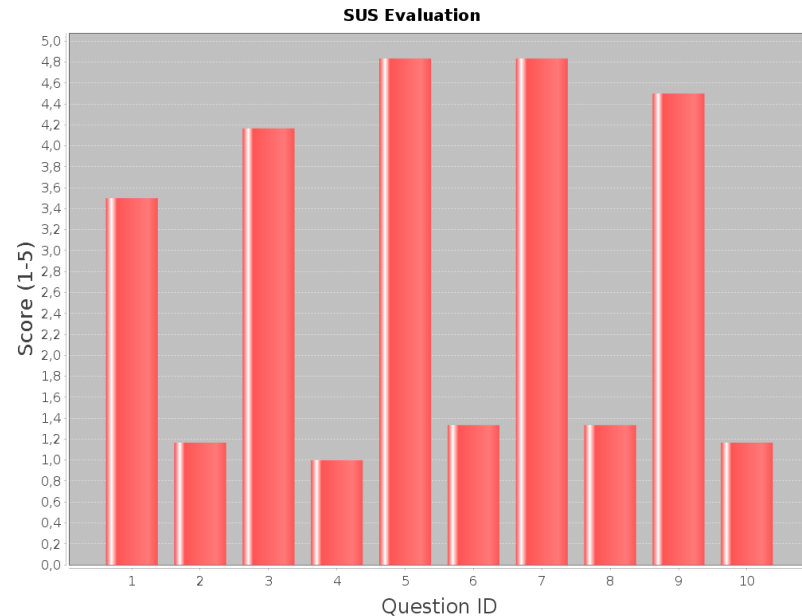
Youtube



# 4. Evaluation (1)

- Nutzung System Usability Scale (SUS) → *“quick and dirty, reliable tool for measuring the usability”*  
<http://www.usability.gov/how-to-and-tools/methods/system-usability-scale.html>
- Einbau als Dialog in der Anwendung / MySQL Backend
- Ergebnisse:

id	question
1	I think that I would like to use this system frequently.
2	I found the system unnecessarily complex.
3	I thought the system was easy to use.
4	I think that I would need the support of a technical person to be able to use this system.
5	I found the various functions in this system were well integrated.
6	I thought there was too much inconsistency in this system.
7	I would imagine that most people would learn to use this system very quickly.
8	I found the system very cumbersome to use.
9	I felt very confident using the system.
10	I needed to learn a lot of things before I could get going with this system.



# 4. Evaluation (2)

- Berechnung SUS wie folgt:

- Normalisierung der Scores

- positiv Fragen -1
- 5 - negativ Fragen

- Summation

→ Zahl im Intervall [0,40]

- Multiplikation mit 2.5
- Interpretation:

Strongly disagree					Strongly agree
				0	4
1	2	3	4	5	
			0		1
1	2	3	4	5	
	0				1
1	2	3	4	5	
0					4
1	2	3	4	5	
	0				1
1	2	3	4	5	

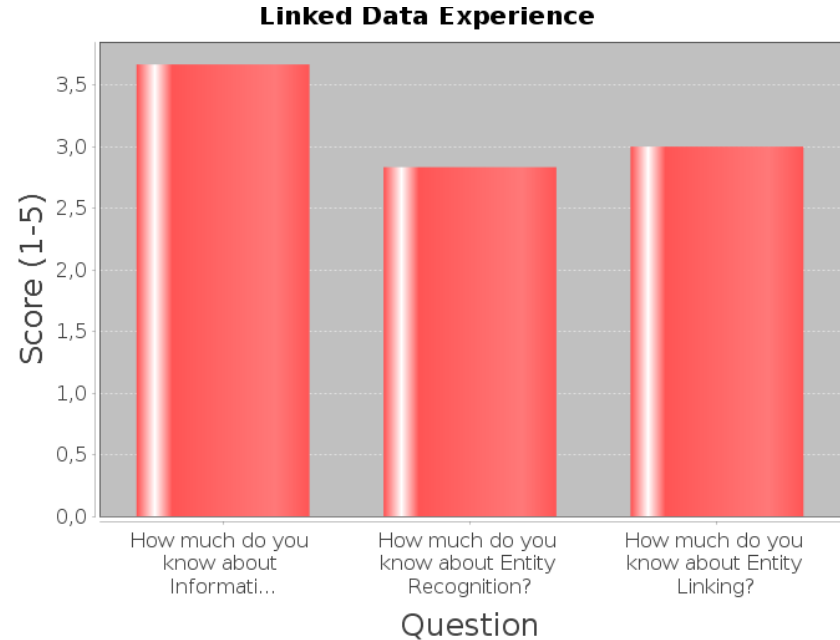
		0			2
1	2	3	4	5	
	0				1
1	2	3	4	5	
			0		1
1	2	3	4	5	
				0	4
1	2	3	4	5	
	0				3
1	2	3	4	5	

Based on research, a SUS score above a **68 would be considered above average** and anything below 68 is below average, however the best way to interpret your results involves “normalizing” the scores to produce a percentile ranking.

# 4. Evaluation (3)

- *Ergebnisse:*

- **SUS gewichtet: 89.42 %**
- **SUS Ungewichtet: 89.85 %**



# 4. Evaluation (4)

## *Herausforderungen:*

- Hinzufügen weiterer Widgets, z.B. zum Anzeigen der wichtigen oder ähnlichen Tripel des Subjekts
- Verbesserung der Ergebnisse der Widgets (z.B. Schwalbe, etc.)
- Verbesserung der Suchvorschläge (z.B. für Ressource Berlin)
- Suchvorschläge für andere SPARQL Endpoints als DBPedia (Indexierung in DB)
- Weitere Teilnehmer für die Evaluation überzeugen
- Task Driven Evaluation (TDE) im Vergleich zu Google → besonders im Hinblick darauf, die Verlinkung der Daten auszunutzen

# 5. Ihre Fragen