Evaluation of LinDA and Comparison with other tools for visualization of Linked Data

List of Alternate Tools Specification

Lab Semantic Web Technologies – WS14/15

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1. Introduction

1.1. Revision History

Edition	Date	Authors	Remarks
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1.1. Purpose

The purpose of this document is to provide a list of alternate tools for the visualization of RDF data sets. This will be helpful in the comparison of LinDA with the possible tools from the list. Each tool has its own purpose and provides its own features. This comparison will help LinDA to identify its own pros and cons and how competitive compared to the other tools.

This document is intended for the Supervisors of our Semantic Web Technologies Lab at the University of Bonn. It can also be used by the stakeholders of Enterprise Information Systems such as software developers, managers and businesses.

1.2. Scope

The scope of this document is to provide the stakeholders a list of alternate tools like LinDA which can be used for visualization of datasets. This document gives the information about the tools like description, file formats supported, and the like.

1.3. Definitions, Acronyms, Abbreviations

- LinDA: Linked Data Analytics
- RDF: Resource Description framework is a family of World Wide Web Consortium (W3C) specifications used as a general method for conceptual description or modelling of information that is implemented in web resources, using a variety of syntax notations and data serialization formats.

- Evaluators: A group of people who are involved in understanding the product quality which are: usability, efficiency and scalability and compare the new tool with the already existing tool.

- SPARQL: SPARQL Protocol and RDF Query Language

1.4. References

Reference Name	Reference Link
Tableau Public	http://www.tableausoftware.com/public/faq
Cytoscape	http://www.cytoscape.org/what_is_cytoscape.html
OntoWiki CubeViz	http://cubeviz.aksw.org/
Prefuse	http://prefuse.org/doc/faq/#
gFacet	http://www.visualdataweb.org/gfacet.php
RDF:SynopsVIZ	http://www.w3.org/2001/sw/wiki/Rdf:SynopsViz
Sgvizler	http://dev.data2000.no/sgvizler/
Visualbox	http://alangrafu.github.io/visualbox/

2. Tools Description

2.1. Tableau Public

Tableau Public is a free service that lets anyone publish interactive data to the web. Once on the web, anyone can interact with the data, download it, or create their own visualizations of it. No programming skills are required. Be sure to look at the gallery to see some of the things people have been doing with it. Tableau Public includes a free desktop product that you can download and use to publish interactive data visualizations to the web. The Tableau Public desktop saves work to the Tableau Public web servers – nothing is saved locally on your computer. All data saved to Tableau Public will be accessible by everyone on the internet, so be sure to work only with publically available (and appropriate) data.

File Format Supported: Tableau Public can connect to Microsoft Excel, Microsoft Access, and multiple text file formats. It has a limit of 1,000,000 rows of data that is allowed in any single file.

Download Link: http://www.tableausoftware.com/public/download

2.2. Cytoscape

Cytoscape is an open source software platform for visualizing molecular interaction networks and biological pathways and integrating these networks with annotations, gene expression profiles and other state data. Although Cytoscape was originally designed for biological research, now it is a general platform for complex network analysis and visualization. Cytoscape core distribution provides a basic set of features for data integration, analysis, and visualization.

File Format Supported: Cytoscape can read file structures that are delimited Text or Excel files.

Download Link: http://www.cytoscape.org/download.php

2.3. OntoWiki CubeViz

CubeViz was developed based on OntoWikiwith the scope of offering user-friendly exploration possibilities for statistical data represented in RDF with the RDF DataCube vocabulary. CubeViz represents the statistical dataset to be visualized as a facetted based browsing component. This component enables the users to select interesting parts of the dataset. After selection the user can proceed while clicking on the button Update Selection / Update Chart. One can instantly start using CubeViz while clicking on the button Start CubeViz above. As a result CubeViz processes a chart according to user's selection. The current version of CubeViz processes basic chart types - such as line, bar and pie chart facilitating the exploration of up to two statistical dimensions in a data structure.

File Format Supported: Microsoft Excel, CSV Files.

Download Link: It is an online facetted browser. http://cubeviz.aksw.org/

2.4. CODE: Query and VIZ Wizard

The amount of Linked Data available on the Web is growing continually, due largely to an influx of new data from research and open government activities. However, it is still quite difficult to directly access this wealth of semantically enriched data without having in-depth knowledge of semantic technologies. Therefore, one of the goals of the EU-funded CODE project has been to develop a web-based visual analytics platform that enables non-expert users to easily perform exploration and analysis tasks on Linked Data. CODE's vision is to establish a tool chain for the extraction of knowledge encapsulated in scientific research papers along with its release as Linked Data. A web-based visual analytics interface should empower the end user to analyse, integrate, and organize the data. The CODE Query Wizard and the CODE Vis Wizard fulfil this role.

Website link: http://code.know-center.tugraz.at/search

Supported format: RDF

2.5. LodLive

It is a web based application and provides visualization for linked open data. It has options to use numerous SPARQL endpoints like DBpedia and freebase. Also provides the option to use other resource address.It simply asks to select the resource and with a simple start button you can start working on the dataset.

Website Link: http://en.lodlive.it/

2.6. RDF:SynopsViz

RDF:SynopsViz is a tool for hierarchical charting and visual exploration of RDF & Linked Open Data. Hierarchical RDF exploration is based on the creation of multiple levels of hierarchically related groups of resources based on the values of one or more properties. The adopted hierarchical model provides effective information abstraction and

summarization. Also, it allows efficient -on the fly- statistic computations, using aggregations over the hierarchy levels.

Website Link: http://83.212.97.83:8084/

2.7. Lumira

Lumira is a Visualization tool from SAP. Lumira helps to create stunning and interactive visualizations. There is a rich library available for visualization types. The library includes: scatter plots, heat and geo maps to tag clouds, box plots and network charts. We can share our findings with others, both internal and external, through engaging infographics and story board.

Website Link: http://saplumira.com

Supported format: MS Excel, CSV