

Description

Source for data is MySQL database

Two tables:

Word with columns: id; name; xposition; yposition;

Link with columns: id; source(word_id); target(word_id); link_number;

Visualization has to be made for displaying multidimensional data in 2D screen: words(**EI**) with directed links

Shown level - is shown without overlapping, others (if chosen to show \$levels more) - with decreased contrast and overlap is conceivable.

Every selected Els links show in the same unique \$colour

All links of the root EI show in unique colours.

Algorithms for visualization can be used **from scratch**:

[1] Kamada T, Kawai S. An algorithm for drawing general undirected graphs. Information Processing Letters 1989, 31(1), 7-15.

[2] Kullback-Leibler divergence

http://intelliart.net/visuwords/Semidefinite_Embedding.pdf

[3] Schvaneveldt R. (Ed.) Pathfinder associative networks: studies in knowledge organization. Norwood, NJ: Ablex; 1990.

Or java vis. toolkit with already implemented algorithms can be used:

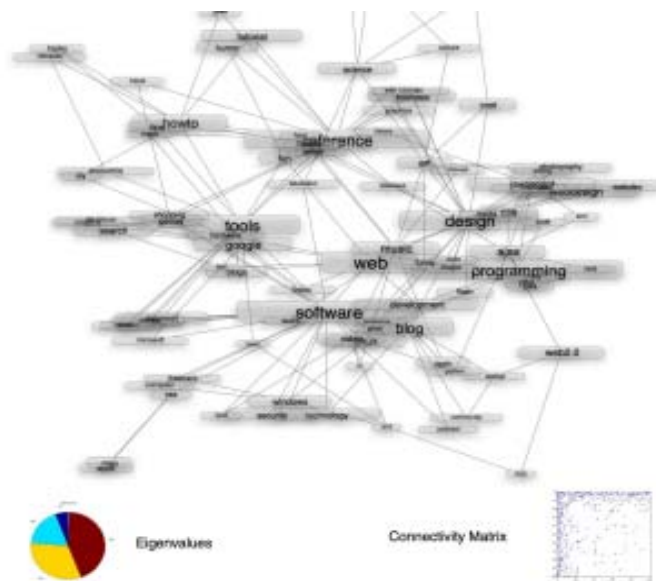
<http://prefuse.org>

Representation:

Tools panel on the left side consists of Menu items, shown on the diagram with yellow rectangle without border

Example of visualized data model: <http://www.nosolousabilidad.com/hassan/visualizious/svgdemo.php> (view only with fully svg supported browser: Opera; Firefox doesn't show everything)

Or Semidefinite Embedding:



At the diagram below in keys block notation conventions are shown for the main diagram.

Elements are "WYSIWYG editable" and draggable.

Notation for diagram

\$ - optional value, can be customized through the interface

EI - element: word or phrase in \$form (circle) with \$background and \$border

L - link \$color \$type (dotted) line between Els, has its own id; Link (of the same id) can consist of several consecutive lines between Els

level - number of sequentially linked EI

hyperlink - text in a block, word in fact.

Functions:

New - create new El ready for typing its name

Create L - from Link.source to this using ancestor if corresponding link from/to source/target selected

Select El - select only this (clicked) and Show all(\$) (\$)level El

Select El <all incoming> - this and all incoming linked elements

Select L - if several choose shortest

USelect - leave selected only Elements somehow connected with all currently selected Elements

+Select - add to selection

Deselect(Hide) Line - deselect(hide) Link or El and all Els linked with it

Choose L - two El can be connected with many Links of different id - show ContextMenu to choose one (or several with Shift)

Show Cmenu - show Menu in Context menu

makeRoot - position all linked Els around this

Move - move this and all shown linked but not selected with it to specified position

autocomplete - from DB by alphabet (first \$words)

