

Semantic Map

URL: <http://netzspannung.org/about/tools/semantic-map/index.xsp?lang=en¤tpage=0>

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The SEMANTIC MAP INTERFACE



Archives are conventionally organized on the basis of subject-specific systems. However, because no cross-subject system exists yet for the interdisciplinary field of media art, a new method of contextualizing and visualizing content was developed for netzspannung.org, namely the Semantic Map.

The Semantic Map is an interface that structures and visualizes all the content of netzspannung.org according to semantic criteria. It provides the user with different possibilities for "rummaging through" the platform's databases to discover content and connections. The Semantic Map was specially developed so that the platform's heterogeneous content could be presented in a common frame of reference. The netzspannung.org database comprises documentations of media artworks, projects from IT research, design approaches, and themes connected with media theory and aesthetics/art history.

Semantic Map, german Version [START](#)

Semantic Map, english Version [START](#)

Requires [link 01] Java Web Start; [link 02] Technical Information.

Text analysis and visualization

During the first stage of the data-processing process, the brief descriptions of all netzspannung.org's database entries are analyzed in terms both of the words used and of their absolute as well as relative frequency, with very frequent words that are irrelevant to the content (e.g. "the", "with", etc.) being filtered out. This process generates - among other things - a list of the most important concepts. These concepts are used for the graphical visualization: they form the titles of the clusters. The database entries are graphically arranged in a map by using a neural network. With the help of the so called Kohonen - Map, the system allocates each database entry on the basis of the text analysis to a cluster, at the same time relating it to all the other database entries in accordance with their semantic proximity. Semantic Map is, therefore, a map that allocates netzspannung.org's database

entries to the clusters that are closest in terms of content, and which indicates the interrelations among the database entries. This form of contextualization and visualization provides users with different access points for "rummaging through" the content of netzspannung.org's database and discovering new content.

From the overview to detailed information

To begin with, the Semantic Map provides an overview by coalescing all the contents of the database into large clusters under the most important concepts. Each database entry is represented on the map as a small square. Rolling over it causes the title of the database entry to appear. A zoom interface allows individual areas of the map to be viewed in more detail. Zooming in leads to the next information level, which displays all the titles of the database entries simultaneously. Rolling over a title in turn causes the subtitle and author of the relevant database entry to be shown. If the user clicks on the title, a brief description of the particular database entry appears in the left information field, which can be opened from this location in the browser. Once a database entry in the map has been selected, "show similar entries" mode can be invoked. Those entries that show the greatest semantic similarity with the contribution selected are the displayed.

From the detail to the overview

This gradation of the information levels also permits access the other way round. A user who wants to search through the archive starting from a known database entry first locates the project through the search function. While entering a word into the search box, the interface highlights the database entries found for that searchword. Now, starting from the database entry found, the user is presented with two options for finding related database entries. Either he/she can explore the associated cluster, or - using the aforementioned "show similar" mode - he/she can have those database entries displayed whose descriptions have the most semantic similarities.

Filter functions

Semantic Map's filter functions enable the user to semantically restrict the database entries shown in the interface. Selecting one or more keywords causes unwanted database entries to fade into the background.

Technical information

Since Semantic Map is based on the analysis of texts, netzspannung.org provides both a map showing the English and a map showing the German database entries. These maps are different because many database entries exist in only one language. You will need to have Java 1.4 or higher to use the semantic map. If you do not have Java installed, or if you are not sure, go to [link 03] <http://www.java.com> and click on "Get it now". This will download

and install the latest version of Java (or it will tell you that you already have it installed).
Once the Java installation is finished, click on the link above to install the Semantic Map.

Liste der Links in der Seite:

[link 01]<http://www.java.com>

[link 02]<http://netzspannung.org/about/tools/semantic-map/?lang=en#technical-info>

[link 03]<http://www.java.com>