

What Makes a Wiki Semantic?

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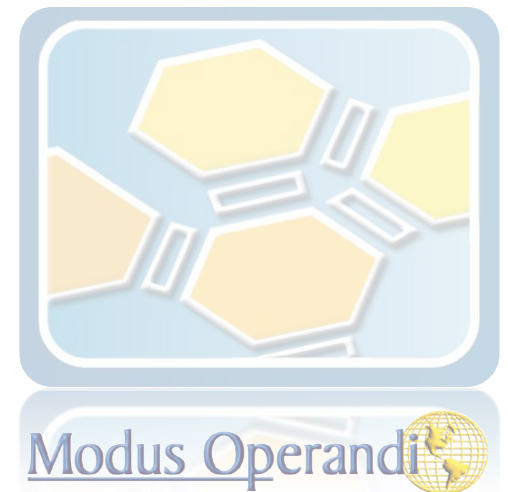
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Modus Operandi 

What's a Wiki?

- collaborative web site
- allows non-webmasters to add content
 - easily create/edit pages
 - easily link to other pages
- keeps edit history (allows roll-back)
- usually supports self-registration



Example: Wikipedia

The image shows a screenshot of the Wikipedia page for "Semantic Web". The browser address bar shows "en.wikipedia.org/wiki/Semantic_web". The page title is "Semantic Web" and it is noted as "Redirected from Semantic web". The main text describes the Semantic Web as a collaborative movement led by the World Wide Web Consortium (W3C). A callout bubble points to the "Edit" link in the top navigation bar, labeled "Edit". Another callout bubble points to the "Self-register" link in the top right corner, labeled "Self-register". A third callout bubble points to the "View history" link, labeled "Page edit history". A fourth callout bubble points to the link format "[[Tim Berners-Lee]]" in the text, labeled "Link format (when editing)".

W Semantic Web - Wikipedia x

en.wikipedia.org/wiki/Semantic_web

Article Talk Read Edit View history Search

Self-register

Edit

Page edit history

W3C Semantic Web

W3C's Semantic Web logo

The term was coined by **[[Tim Berners-Lee]]**

Link format (when editing)

WIKIPEDIA The Free Encyclopedia

Main page Contents Featured content Current events Random article Donate to Wikipedia Wikimedia Shop

Interaction Help About Wikipedia Community portal Recent changes Contact Wikipedia

Toolbox Print/export

Languages العربية বাংলা Български Català

From Wikipedia, the free encyclopedia (Redirected from Semantic web)

The **Semantic Web** is a collaborative movement led by the international standards body, the World Wide Web Consortium (W3C).^[1] The standard promotes common data formats on the World Wide Web. By encouraging the inclusion of semantic content in web pages, the Semantic Web aims at converting the current web dominated by unstructured and semi-structured documents into a "web of data". The Semantic Web stack builds on the W3C's Resource Description Framework (RDF).^[2]

According to the W3C, "The Semantic Web provides a common framework that allows data to be shared and reused across application, enterprise, and community boundaries."^[2]

The term was coined by Tim Berners-Lee,^[3] the inventor of the World Wide Web and director of the World Wide Web Consortium ("W3C"), which oversees the development of proposed Semantic Web standards. He defines the Semantic Web as "a web of data that can be processed directly and indirectly by machines."

While its critics have argued that the Semantic Web is a complex and expensive technology, its benefits have already proven to be significant in the areas of business and health.

The original 2001 *Scientific American* article by Berners-Lee, Hendler, and Lassila described an expected evolution of the existing Web to a Semantic Web,^[5] but this has yet to be fully realized. Some of his colleagues stated that: "This simple idea ... remains largely unrealized."^[6]

Contents [hide]

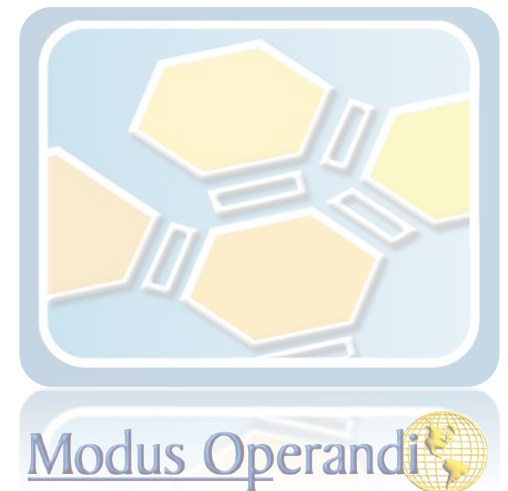
1 History

2 Purpose

Wiki Issue

- how to handle these goals?
 - list the 10 most populous cities in Germany
 - list of books by U.S. authors
 - list members of "Organization X" that are also leaders of other organizations
- answer: hand-edit and manually maintain

- or... use a **semantic wiki**



What's a Semantic Wiki?

- semantics = meaning
- a *semantic* wiki has at least these features:
 - *pages* can be *assigned a type*
 - *page links* can be *assigned a meaning*
 - *data values* (in a page) can be *assigned a meaning*

(which enables...)

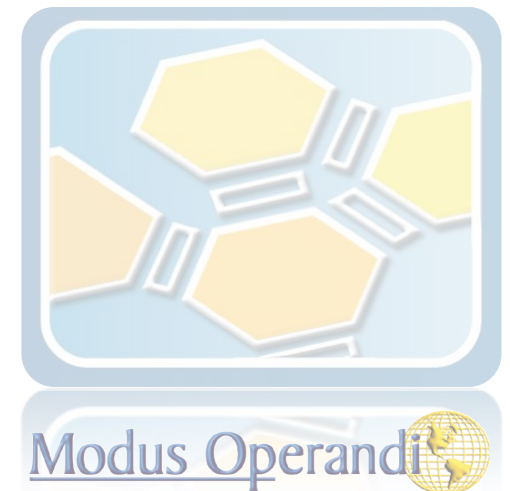
- *dynamic page content* via queries



How are Features Achieved?

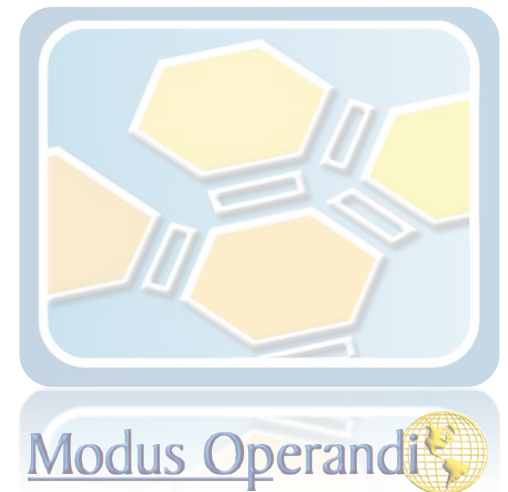
- pages assigned a type
 - via markup, e.g.: `[[Category:City]]`
 - via user interface
- page links assigned a meaning
 - via markup, e.g.: `[[located_in::Germany]]`
 - via user interface / forms
- data values (in a page) assigned a meaning
 - via markup e.g.: `[[population::3,000,000]]`
 - via user interface / forms
- dynamic page content via queries
 - e.g.:

```
{[#ask: [[Category:City]]  
[[located_in::Germany]]  
| ?population ]}
```



Demonstration

- two examples of semantic wikis:
 - Semantic MediaWiki
 - Semantic XWiki



Take-aways

- wikis are great for information collaboration
- semantic wikis go farther, creating a collaborative, query-able, semantic knowledge model

- Questions?

