

Semantic Web Challenge

<http://challenge.semanticweb.org>

What is the Semantic Web Challenge?

Participants have the chance to show the possibilities of the current Semantic Web technologies. We already have infrastructures, languages, reasoning engines, etc. that enables us to develop integrated, useful, and attractive applications..

The "Semantic Web Challenge" serves for several purposes:

- ◆ Help us illustrate to society what the Semantic Web can provide
- ◆ Give researchers a benchmark to "compare" research results
- ◆ Stimulate current research to a higher final goal

What is the goal?

The overall objective of the challenge is to apply "Semantic Web techniques" in order to build an online application that integrates, combines, and deduces information needed to assist users in performing tasks. The challenge will continue for at least five years and will be updated annually, according to the development of the Semantic Web.

Semantic Web Challenge 2005

People from academia and from industry are invited to submit applications that illustrate the possibilities of the Semantic Web. The applications should integrate, combine, and deduce information from various sources to assist users in performing specific tasks.

The submissions should at least satisfy the minimal requirements for a Semantic Web Application and preferably exhibit some of the additional desires.

Although we expect that most applications will use RDF, RDF Schema, and OWL, this is not an official requirement.

For the challenge 2005, we encourage people to show the benefit of re-using existing ontologies, schemas, or models. These can be standard ontologies, but also proprietary schemas developed for other applications.

How is the challenge organized?

The challenge intentionally does not define specific data sets because the potential applicability of the Semantic Web is very broad.

Therefore, a number of minimal criteria have been defined which allow people to submit any type of ideas in the form of an application. In addition to the criteria, a number of specific desires have been formulated. The more desires are met by the application, the higher the score will be.

A Semantic Web Challenge Advisory board will define an additional goal every year. The board consists of experts working at universities and in private industry. It will also act as a jury and award the best applications at the ISWC conference. The members are: Dean Allemang, Jürgen Angele, Mike Dean, Stefan Decker, Jérôme Euzenat, Frank van Harmelen, Ian Horrocks, Atanas Kiryakov, Michel Klein, Deborah McGuinness, Rob Shearer, Amit Sheth, York Sure, Mike Uschold, and Ubbo Visser.

What is a Semantic Web Application?

A Semantic Web Application has to meet the following minimal requirements.

1. First, the information sources used
 - ◆ should be geographically distributed,
 - ◆ should have diverse ownerships (i.e. there is no control of evolution),
 - ◆ should be heterogeneous (syntactically, structurally, and semantically), and
 - ◆ should contain real world data, i.e. are more than toy examples.
2. It is required that all applications assume an open world, i.e. assume that the information is never complete.
3. Finally, the applications should use some formal description of the meaning of the data.

What are the additional desires

Besides the minimal criteria, a number of desires are formulated. The more desires are met, the higher an application can score. The desires are:

- ◆ The application uses data sources for other purposes or in another way than originally intended
- ◆ Using the contents of multi-media documents
- ◆ Accessibility in multiple languages

- ◆ Accessibility via devices other than the PC
- ◆ Other applications than pure information retrieval
- ◆ Combination of static and dynamic knowledge (e.g. combination of static ontologies and dynamic workflows)
- ◆ The results should be as accurate as possible (e.g. use a ranking of results according to validity)
- ◆ The application should be scalable (in terms of the amount of data used and in terms of distributed components working together)

How to participate

Visit <http://challenge.semanticweb.org> in order to participate and register for the Semantic Web Challenge by submitting the required information as well as a link to the application on the online registration form. The form will be open until **June 15, 2005, 12 p.m. CET**. The requirements of this entry are:

1.) Abstract: No more than 200 words.

2.) Description: The description will show details of the system including why the system is innovative, which features or functions the system provides, and why it is relevant to the challenge. Examples of its use must be provided and if the application includes the additional desires these should be mentioned. The description should not exceed four pages (LNCS format). Selected descriptions will be published in the conference proceedings.

2.) Accessibility: The application should be accessible via the web. If the application is not publicly accessible, passwords should be provided. We also ask to provide a (short) instruction on how to start and use the application.

Prizes

The prizes for the winners will be available as travel support and book vouchers. The winners will also be asked to give a live demonstration of their application at the ISWC 2005 conference.

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Examples for the Challenge

Here are two examples of Semantic Web Applications. Additionally, you find some suggestions about the information sources that can be used and about eligible goals. However, you are free to choose your own application and information sources.

Example 1: Disaster Management

Use and integrate data from various sources, in various formats to provide actual and accurate support in a disaster situation (e.g. the flood in Germany in August 2002 or the fires in the USA). Possible information sources are weather information, maps from geographical information systems, news sites, satellite images, etc.

Goal: The application should be able to provide answers to different queries, e. g.

- ◆ What is likely to happen in the next days?
- ◆ Which cities are not accessible anymore?
- ◆ What public transport services are still running?

Example 2: Personal information

Personal information can be found in great quantities on the Web, they are understood by anyone and they are arbitrarily difficult to find.

The data can be found in/on conference calendars, home pages, phone directories, etc. Connecting and integrating them is the first step towards the goal. It demonstrates the ability to merge heterogeneous information sources. It also demonstrates the ability to take advantage of the Web.

Goal: Dealing with these data on the Semantic Web can help answering questions like

- ◆ What is the homepage of this individual?
- ◆ What is the phone number of his assistant?
- ◆ Will I and he have an opportunity to meet within a month?