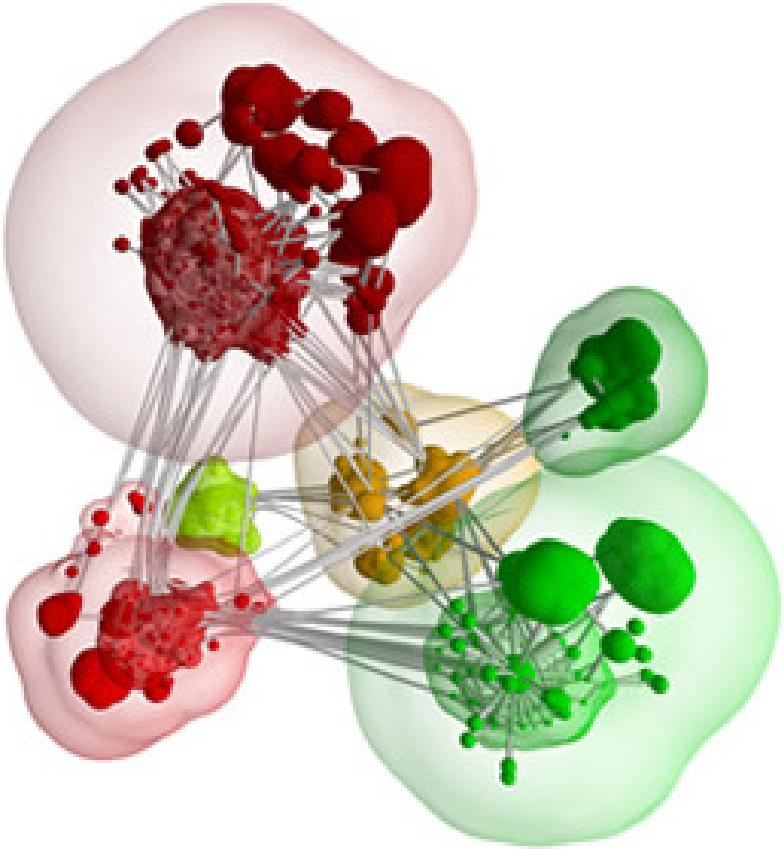
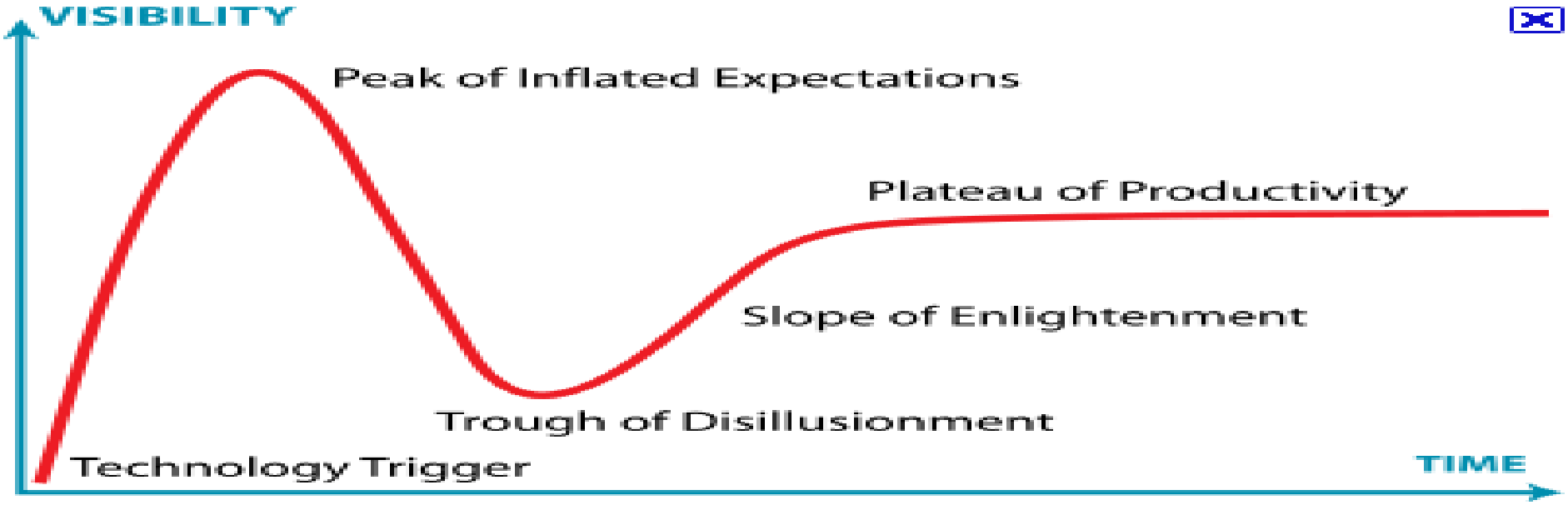
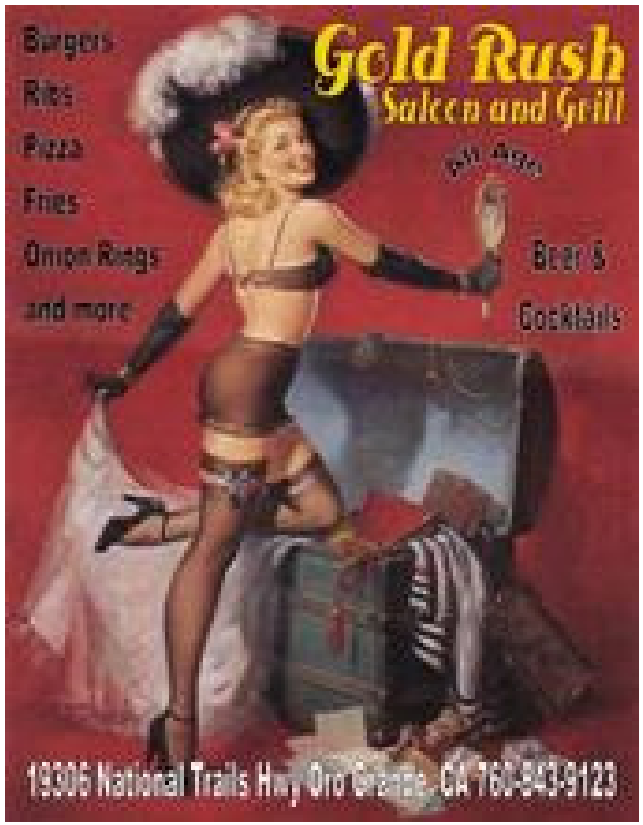
About winning the Google AI Challenge.

Gabor Melis
Jans Aasman




VISIBILITY
Peak of Inflated Expectations
Plateau of Productivity
Slope of Enlightenment
Trough of Disillusionment
Technology Trigger
TIME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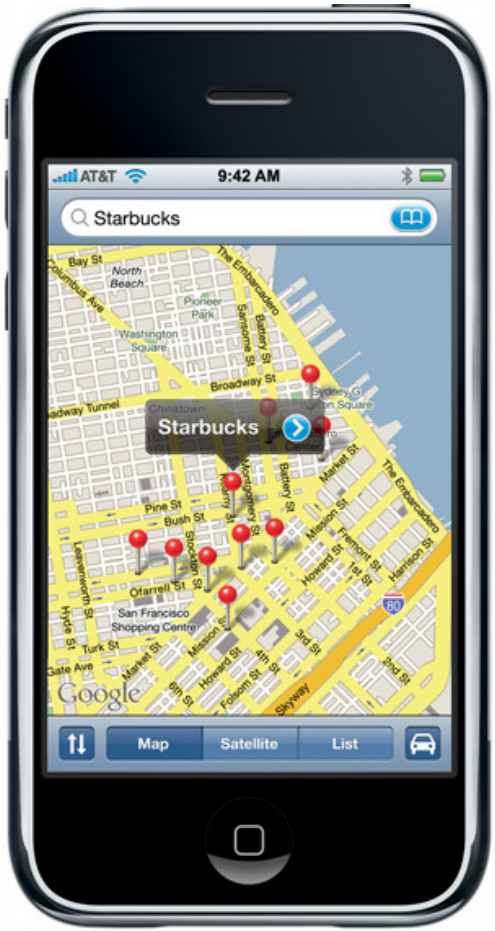
WIRED

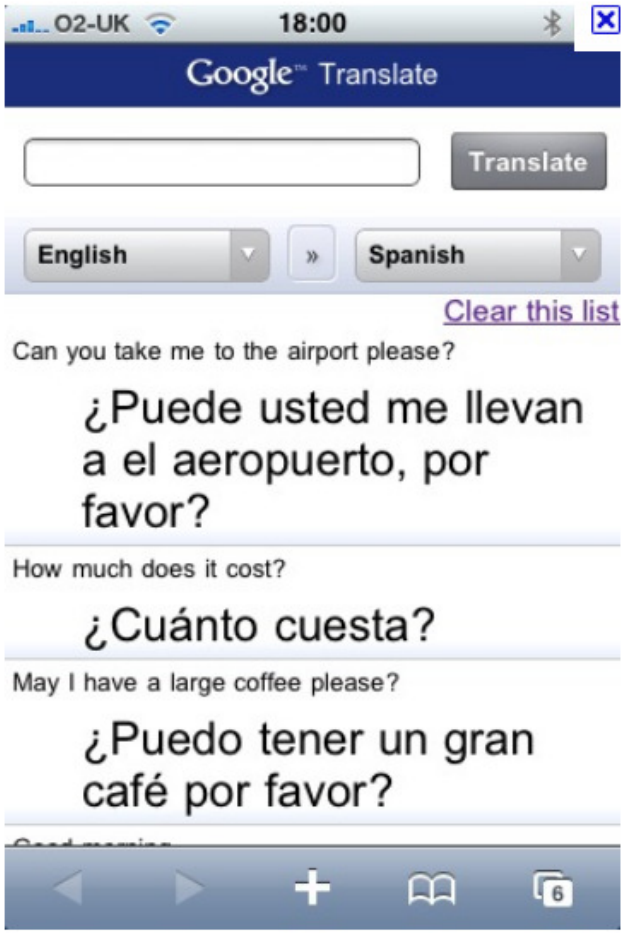
Artificial Intelligence is here. But it's nothing like we expected.

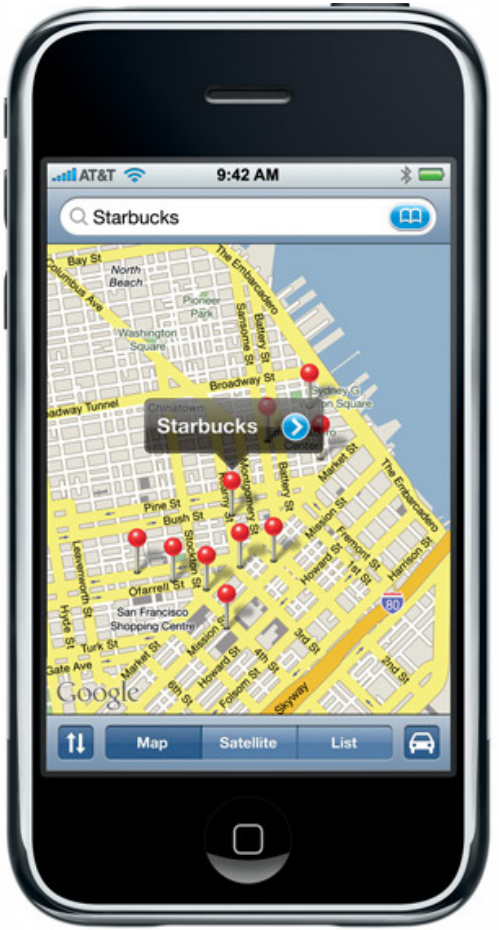
A WIRED SPECIAL REPORT

If it works, it's not AI ☺

A commercial Look at AI startups, Eve, M, Phillips, 1999.



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ASIMO

STANDARDS

- Web Design and Applications
- Web Architecture
- Semantic Web
- XML Technology
- Web of Services
- Web of Devices
- Browsers and Authoring Tools
- All Standards and Drafts
- About W3C Standards

Can you imagine web developers thinking about inference??

SEMANTIC WEB

On this page → technology topics • news • upcoming events and talks

In addition to the classic "Web of documents" W3C is helping to build a technology stack to support a "Web of data," the sort of
is to enable computers to do more useful work and to develop systems that can support trusted interactions over the network.
linked data. Semantic Web technologies enable people to create data stores on the Web, build vocabularies, and write rules for
such as RDF, SPARQL, OWL, and SKOS.

Linked Data

The Semantic Web is a Web of data — of dates and titles and part numbers and chemical properties and any other data one might conceive of. RDF provides the foundation for publishing and linking your data. Various technologies allow you to embed data in documents (RDFa, GRDDL) or expose what you have in SQL databases, or make it available as RDF files.

Vocabularies

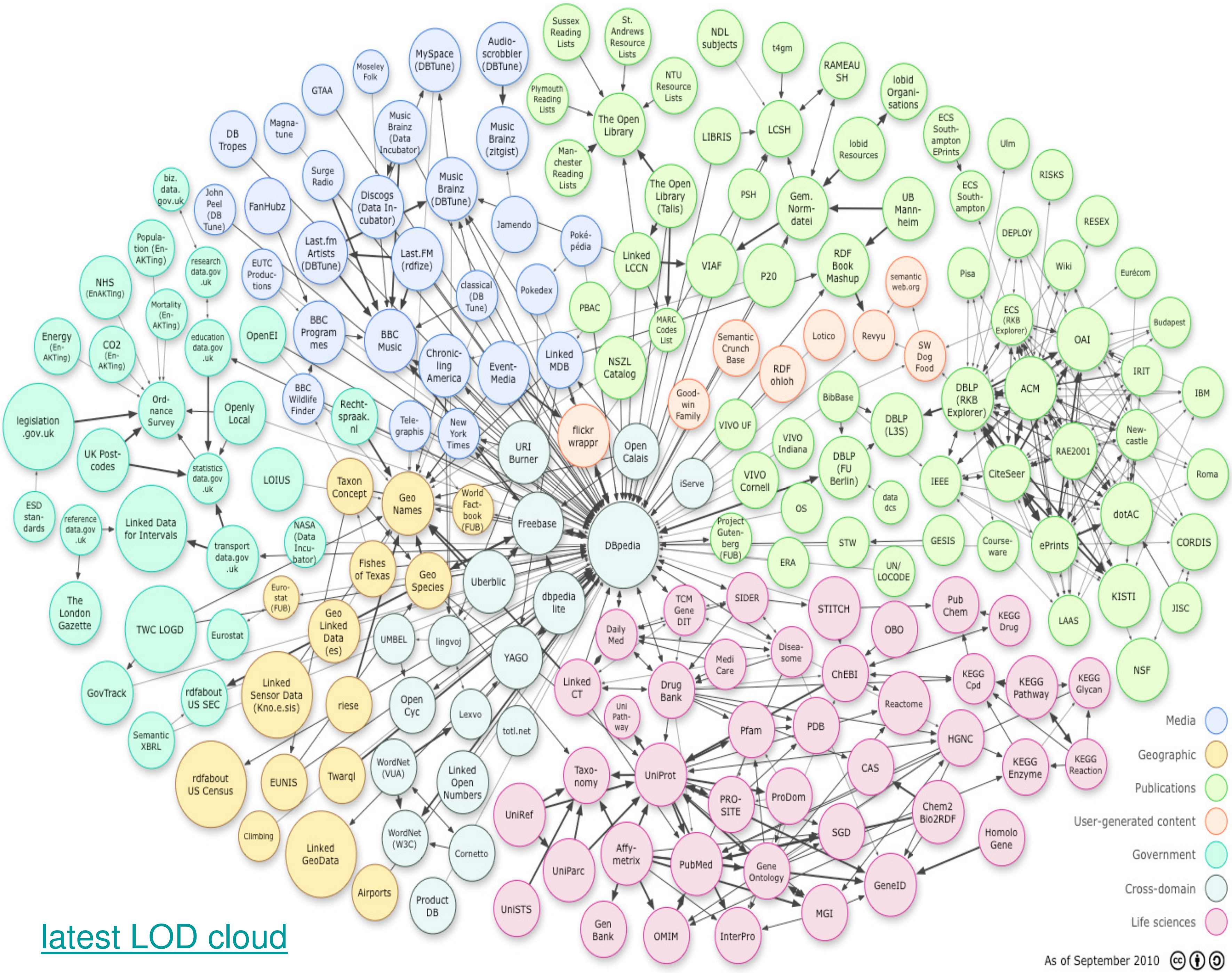
At times it may be important or valuable to organize data. Using OWL (to build vocabularies, or "ontologies") and SKOS (for designing knowledge organization systems) it is possible to enrich data with additional meaning, which allows more people (and more machines) to do more with the data.

Inference

Near the top of the Semantic Web stack one finds inference — reasoning over data through rules. W3C work on rules, primarily through RIF and OWL, is focused on translating between rule languages and exchanging rules among different systems.

Vertical Applications

W3C is working with different industries — for example in Health Care and Life Sciences, eGovernment, and Energy — to improve collaboration, research and development, and innovation adoption through Semantic Web technology. For instance, by aiding decision-making in clinical research, Semantic Web technologies will bridge many forms of



[latest LOD cloud]

The Use of Lisp in Semantic Web Applications

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ABSTRACT

The Semantic Web adds a layer of logic and metadata to the current World Wide Web. By utilizing traditional Artifical Intelligence (AI) and Knowledge Representation (KR) techniques for both the construction of new documents and linking of existing ones, the Semantic Web facilitates machine-to-machine (or "agent-to-agent") communication. Lisp's proven reliability and flexibility in AI and KR make it ideal for constructing intelligent Semantic Web applications. In this paper, we survey the current use of Lisp on the Semantic Web, and suggest some potential uses of it in the future. We conclude the paper with descriptions of Lisp in selected Semantic Web projects that demonstrate its strength and usability.

General Terms

Semantic Web, AI, Lisp, Web Services, Reasoning, Planning

1. INTRODUCTION: LISP DOMINATES AI

Lisp's highly dynamic nature and flexible handling of data has established it as the obvious tool choice for many types of complex Artificial Intelligence applications. Additionally, some of the most exciting research in the fields of Description Logics and other Knowledge Representation areas has used Lisp as its vehicle of representation.

Despite its success in those fields, Lisp has not gained widespread popularity in the realm of Web programming. The current arena of web development is dominated primarily by languages such as Perl and Python. Java also plays a significant role in web client/server software.

The popularity of those languages in this domain is legitimate: they are highly portable, fairly easy to learn and most came into popularity at the same time as the Web, and thus their architecture and supporting libraries/environments were evolving to be more compelling for web-oriented usage. Lisp has reached widespread popularity in programming circles before the Web's existence and therefore followed a different path of development. Although it has been shown that Lisp's unique handling of data structures is equally suitable to process even those non-semantic formats [22], Lisp has never caught on as a Web language.

As the current Web evolves into the Semantic Web, application developers will require a different set of functionality from their tools. Easy access to text manipulation (e.g., Perl's built-in regular expressions) will no longer be the prime focus of every Web application. Reasoning, planning and formal representation of data will become ubiquitous, standard tasks that need to be performed by agents to fully utilize the new semantic data on the web. Lisp is already capable of providing such functionality as shown from its extensive history in those fields.

We believe that Lisp can, in the Semantic Web application domain, take on the role of both the "behind the scenes engine" (serving as a reasoner or planner, for example) as well as the application interface, or front end. In the little use that it has received in web projects, Lisp conventionally only served the former role, leaving the latter to other languages such as Perl, Python and Java.

2. SEMANTIC WEB LANGUAGES

The World Wide Web Consortium (W3C) is overseeing developments of several Semantic Web languages.

The Semantic Web relies on XML [10] as the basis of its rep

Interests

On a quite different track, I am also responsible for *Six*, a Hex playing program for KDE that won the gold medal at the 2003, 2004 and 2006 Computer Games Olympiad. Naturally attracted to A.I. related fields I studied and prototyped online recommender systems, trust networks. Participated in the Netflix Prize, came 11th out of 700 in the first Google AI Contest and *won* the second.