

(Part of)

# Chapter 8

## Conclusion and Outlook

Grigoris Antoniou

Frank van Harmelen

# What is the Problem?

- Consider a typical web

http://www2002.org

## WWW 2002

THE ELEVENTH INTERNATIONAL WORLD WIDE WEB CONFERENCE

Sheraton Waikiki Hotel  
Honolulu, Hawaii, USA  
7-11 May 2002

CONFERENCE ORGANIZERS  
International World Wide Web Conference Committee

2002  
HAWAII

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Registered participants coming from:  
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On 7-11 May 2002, Honolulu, Hawaii will provide the backdrop for The Eleventh International World Wide Web Conference. This prestigious series of the International World Wide Web Conference Committee (IW<sup>3</sup>C<sup>2</sup>) attracts participants from around the world, and it provides a public forum for the World Wide Web Consortium (W3C) through the annual W3C track.

The conference is being organized by the International World Wide Web Conference Committee (IW<sup>3</sup>C<sup>2</sup>), the University of Hawaii and the Pacific Telecommunications Council (PTC).

### FEATURED SPEAKERS (CONFIRMED)

	Tim Berners-Lee, inventor of the World Wide Web and Director of the W3C who now holds the 3Com Founders chair at the Laboratory for Computer Science (LCS) at the Massachusetts Institute of Technology (MIT).		Richard A. DeMillo, vice president and chief technology officer for Hewlett-Packard Company.
	Ian Foster, guru of "Grid Computing", associate		McArthur Prize Winner,

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Program  
Registration Information  
Hotel Accommodation  
Conference Committee  
Sponsorship/Exhibition Opportunities  
Volunteer Information  
Information about Hawaii  
Previous & Future WWW Conferences

- Markup consists of:
  - rendering information (e.g., font size and colour)
  - Hyper-links to related content
- Semantic content is accessible to humans but not (easily) to computers...

# What information can we see...

WWW2002

The eleventh international world wide web conference

Sheraton waikiki hotel

Honolulu, hawaii, USA

7-11 may 2002

1 location 5 days learn interact

Registered participants coming from

australia, canada, chile denmark, france, germany, ghana, hong kong,  
india, ireland, italy, japan, malta, new zealand, the netherlands,  
norway, singapore, switzerland, the united kingdom, the united states,  
vietnam, zaire

Register now

On the 7<sup>th</sup> May Honolulu will provide the backdrop of the eleventh  
international world wide web conference. This prestigious event ...

Speakers confirmed

Tim berners-lee

Tim is the well known inventor of the Web, ...

Ian Foster

Ian is the pioneer of the Grid, the next generation internet ...

# What information can a machine see...

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# Machine sees...

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# Will the Semantic Web Succeed?

## Key Questions

- Where will the ontologies come from?
- Where will the semantic markup come from?
- Where will the tools come from?
- How should one deal with a multitude of ontologies?
- Where can we expect the first success stories?

# Where Will the Ontologies Come From?

- Some large ontologies are becoming de facto standards
  - WordNet
  - NCIBI's cancer ontology
- Many small ontologies
  - are hand-created (e.g. RosettaNet) or
  - Created automatically through machine learning, natural language analysis and from legacy sources (e.g. data schemas)

# Where Will the Semantic Markup Come From?

- Clearly not by hand
- Tools for new information resources
- Natural language techniques, borrowing from legacy sources for old resources

# Where Will the Tools Come From?

- Large variety of tools already exists
  - Editors, storage, querying and inferencing, visualization, versioning
- Mostly developed in academic domain
- ... but taken up in the commercial sector
  - Highly innovative startups

# How Should one Deal With a Multitude of Ontologies?

- A big research question, still open
  - A potential bottleneck
- Various approaches currently tested
  - Negotiation
  - Machine learning
  - Linguistic analysis

# Promising Areas for Initial Successes

- Knowledge Management
  - ... because of central authority
- E-Science
  - Use ontologies, are informed and enthusiastic users of new technology
- E-Commerce probably later
  - Problems with privacy, security and trust