

SEKT

SEmantic Knowledge Technology http://www.sekt-project.com/

16.6.2006





- addressing the semantic knowledge technology research agenda
- EU 6th framework Integrated Project
 - start date 1/1/2004
 - 36 months, €12.5m







- To deliver next generation semantic knowledge technology through:
 - Foundational research
 - (Semi-)automatic ontology generation and population
 - Ontology management (mediation, evolution, inferencing)
 - Innovative technology development
 - A suite of knowledge access tools
 - Open source ontology middleware platform
 - Validated by 3 case studies and benchmarking/usability activities
 - Supported by a methodology





The SEKT partners







University of Sheffield



vrije Universiteit

Siemens Business Services







Institut

"Jožef Stefan" Ljubljana, Slovenija











Universitat Autònoma de Barcelona





Semantic knowledge management classifies, finds, distributes, shares and uses knowledge based on meaning not the particular words used to represent meaning.







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Words and meanings

same word, different meanings

Jaguar

different words, same meaning

disability legislation

equal opportunity laws

different words, related meaning

organisations



company

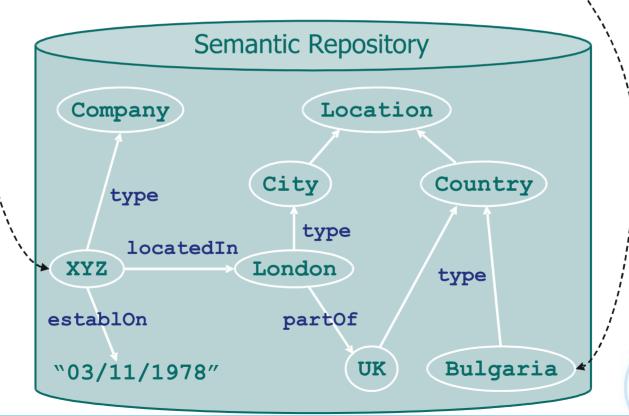
charity

public sector organisations



The knowledge base

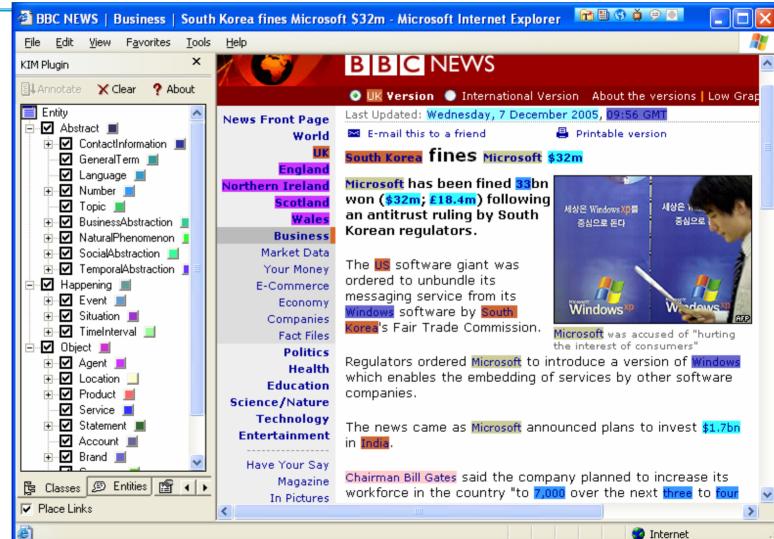
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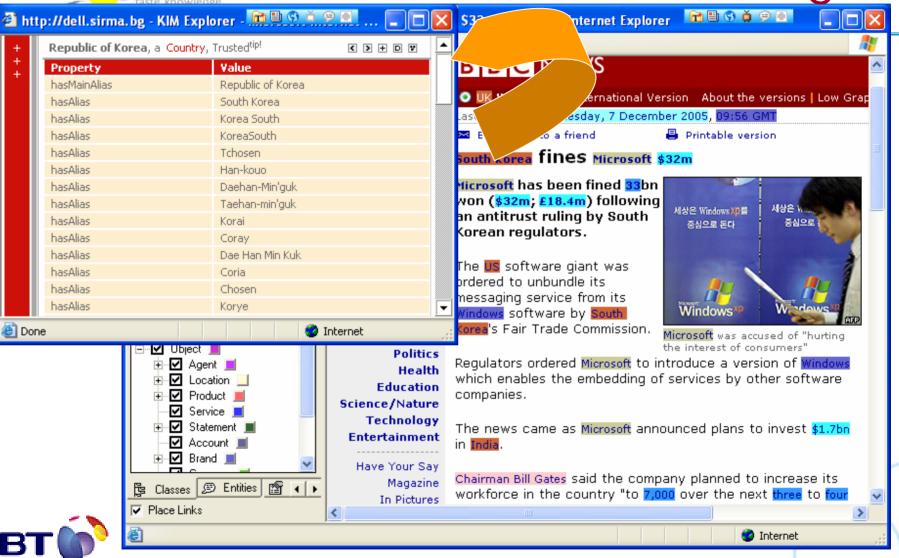
Semantic Browsing







Semantic Browsing





Precision in Semantic Search

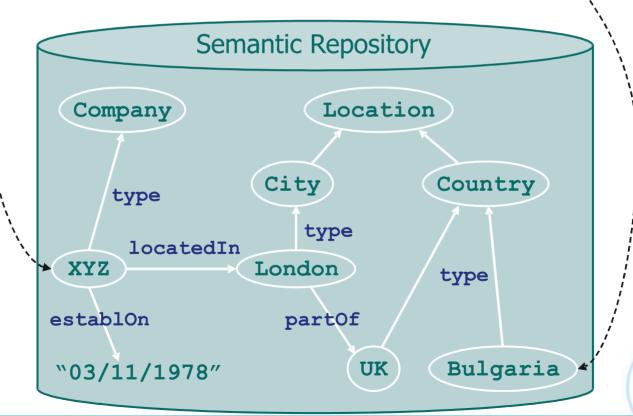
- Semantic Search can match
 - a query: Documents concerning a telecom company in Europe, with John Smith as a director,
 - With a document containing: "At its meeting on the 10th of May, the board of Vodafone appointed John Smith as CTO"
- Traditional search engines cannot do the required reasoning:
 - Vodafone is a mobile operator, which is a kind of telecom company;
 - Vodafone is in the UK, which is a part of Europe;
 - CTO is a type of director





The knowledge base

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Major research challenges

- Improve automation of ontology and metadata generation
- Research and develop techniques for ontology management and evolution
- Develop highly-scalable solutions
- Research sound inferencing despite inconsistent models
- Develop semantic knowledge access tools
- Develop methodology for deployment





Real-world case studies



helping newlyappointed judges





helping IT consultants





a corporate digital library



Use/refinement of SEKT methodology
Usability, business benefits and benchmarking



SEKT applications

