It’s Just Semantics

Ora Lassila
Research Fellow, Nokia Research Center
Chief Scientist, Nokia Venture Partners
Member of the Advisory Board, W3C

March 2002

What’s Wrong with the World Wide Web?

• Built for *humans*, not for *machines*
  • consequently, automating anything is rather difficult

• Possible solution: web content with formal semantics
  • this trend is called “The Semantic Web”
  • lively research area (conferences, workshops, journal, and even emerging standards)
Key Elements of the Semantic Web

• Transforming the web architecture
  • from "indiscriminate pointing" to "links with meaning"

• Ontologies & Reasoning
  • automated systems are able to discover information & services and decide whether these meet their needs
  • "serendipitous interoperability"

• Emerging languages & standards
  • (forget XML – it is not really relevant, sorry)
  • Resource Description Framework (RDF, from W3C)
  • DAML+OIL (from DARPA)
  • Ontology Web Language (OWL, from W3C, under construction)

• “Share the Meaning”

Will the Semantic Web Happen?

• Business models - do they exist?
  • who is going to define and publish the ontologies?
  • advertising no longer a viable business model
  • limited domains (e.g., bioinformatics) and limited deployment (e.g., intranets) show some promise
  • (please come talk to me if you have a good business idea)

• Web Services
  • hyped up as “the next big thing”
  • my prediction: Web Services will not succeed without the techniques of the Semantic Web
    • “Tower of Babble” phenomenon (Genesis 11)

• “It smacks of artificial intelligence...”
  • (from a recent article on CNET)
  • AI is useful for the Semantic Web, but we can start deployment without it