

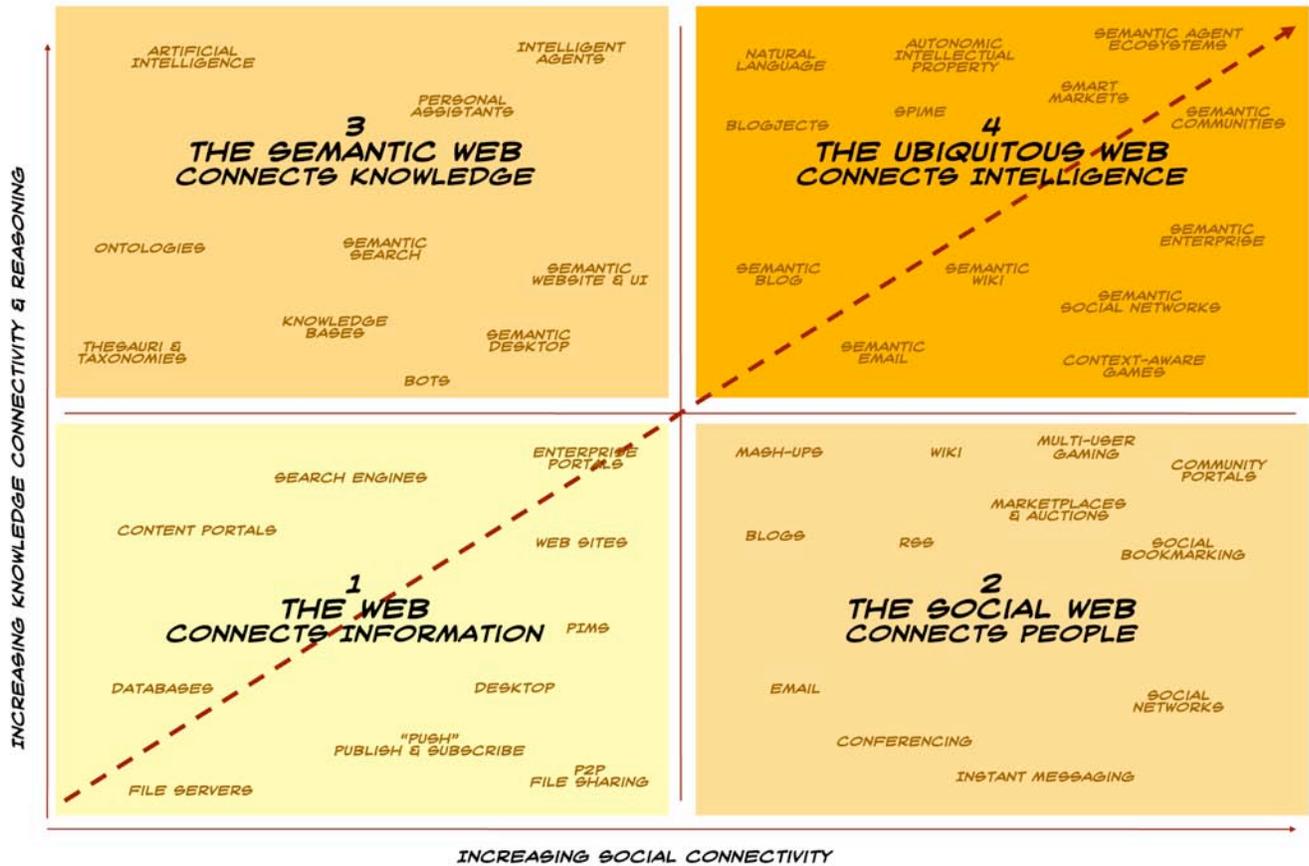
***Get your
Roadmap
to Web 3.0***

Project10X announces publication of a groundbreaking 400-page study of semantic wave technologies and their market impact that is must reading for investors, technology developers, and enterprises in the public and private sector.

Semantic Wave 2008: Industry Roadmap to Web 3.0 charts the evolution of semantic technologies and the growth of multi-billion dollar markets for web 3.0 products and services.

Free executive summary available!

What is the evolution of the internet to 2020?



SOURCE: NOVA SPIVAK, RADAR NETWORKS; JOHN BRESLIN, DERT; & MILLS DAVIS, PROTECTION

What is the semantic wave?

The semantic wave is a “long wave” of innovation and investment that embraces four stages of internet growth. The first stage, Web 1.0, was about connecting information and getting on the net. Web 2.0 is about connecting people — putting the “I” in user interface, and the “we” into webs of social participation. The next stage, web 3.0, is starting now. It is about representing meanings, connecting knowledge, and putting them to work in ways that make our experience of internet more relevant, useful, and enjoyable. Web 4.0 will come later. It will be about connecting intelligences in a ubiquitous web where both people and things can reason and communicate together.

What does web 3.0 mean for technology markets?

Over the next decade the semantic wave will spawn multi-billion dollar technology markets that drive trillion dollar global economic expansions to transform industries as well as our experience of the internet. The Semantic Wave 2008 report examines the drivers and market forces for adoption of semantic technologies in web 3.0. They are building.

How is Web 3.0 different from previous stages of internet evolution?

Semantic Wave 2008 tells the story of web 3.0. The basic shift is from information-centric to knowledge-centric patterns of computing. All computing processes represent knowledge in some way to process information. For example: knowledge of how the information is organized; rules that tell a computer program how to make a decision; or action steps of a procedure. However, until now knowledge has been expressed separately in the form of documents, structural models, or program code. Computers were used as electronic pencils, with no understanding of what the writing meant, and absolutely no understanding or cross-referencing what other ways of expressing the same idea meant (such as graphics, images, video, computer languages, formal languages, and other natural languages, etc.).

Web 3.0 changes this. Semantic technologies powering this stage of internet evolution have three key differences from previous stages.

Web 3.0 creates a web of data

The first difference is that knowledge of all kinds gets represented in a form that is interpretable both by people and machines. Machine executable knowledge (called a semantic model, or an ontology) lets us connect information about people, events, locations, times — in fact, any concept that we want to — across different artifacts and different processes. Instead of disparate data on the web, we get a web of interrelated data.

Web 3.0 apps gain “transemantic” capabilities

The second difference is that the myriad forms of language in which knowledge is expressed begin to get interrelated and made interchangeable with each other. For example, policies are typically written out as documents. But, this same knowledge can be modeled as a data structure or as decision rules. Also, policies can be hard coded into software objects or computer code. Using semantic technologies it becomes possible to represent and manage the knowledge expressed in all of these different forms at the level of concepts, rather than separate artifacts.

This leads to computers that can: (a) capture knowledge from different sources such as sensors, documents, pictures, graphics, and other data and knowledge resources, (b) interpret and interrelate these different ways of expressing ideas with each other, (c) share what they know with people and machines, and (d) re-express, and communicate what they know in different contexts, information formats, and media.

Web 3.0 spawns new categories of systems that know, learn, and can reason as humans do.

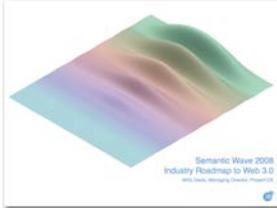
Third, when knowledge is encoded in a semantic form, it becomes transparent and accessible at any time to a variety of reasoning engines.

Previously, if knowledge was in a document or set of documents, then it was fixed when published in a form only humans could read. Or, if knowledge was encoded in a computer program, then it was opaque and hidden in objects or in procedures that were fixed at design time, and hence a “black box” to any other process that had not been pre-programmed with common knowledge.

In web 3.0, we have living knowledge. It is stored in “glass boxes” where it can be used, validated, added to, combined with other knowledge at run time. This enables the system to “learn” to do things that the system designer did not anticipate. This is an important shift from IT as it has been practiced until now.

Web 3.0 enables architectures of learning. That is, systems that improve with use. One way is that users can evolve systems by adding knowledge and capabilities. Another way is that systems may learn by themselves how to respond to changes in their environments.

Semantic Wave 2008



Semantic Wave 2008: Industry Roadmap to Web 3.0

Report Specifications

Report Outline

Format	PDF — Color and B&W	1 Executive Summary
Pages	400	2 Semantic Wave
Figures	290	3 Semantic Technologies
Vendors	270	4 Semantic Markets
Applications	110	5 Opportunities
Market sectors	15	Addenda
Case examples	150	
Price	\$2995 USD	
Availability	Nov 1, 2007	

Semantic Wave 2008 explains the new semantic technology and gives perspective on emerging patterns and keys to success. It gauges both technology and market readiness. By mapping the frontier, it shows where the tough problems are, and where to look for breakthroughs. But, most importantly, Semantic Wave 2008 profiles significant opportunities for executives, developers, designers, entrepreneurs, and investors. What to build and what to buy, and why. For this, SW2008 is simply the most comprehensive resource available anywhere at this crucial time.

The technology section of the report examines five strategic technology themes and shows how innovations in these areas are driving development of new categories of products, services, and solution capabilities. Themes include: executable knowledge, semantic user experience, semantic social computing, semantic applications, and semantic infrastructure. The study examines the role of semantic technologies in more than 100 application categories. An addendum to the report surveys more than 250 companies that are researching and developing semantic technology products and services.

The market section of the report examines the growth of supply and demand for products, services and solutions based on semantic technologies. Specifically, the report segments and discusses semantic wave markets from five perspectives: research and development, information and communication technology, consumer internet, enterprise horizontal, and industry verticals. Viewed as horizontal and vertical market sectors, each presents multi-billion dollar opportunities in the near- to mid-term. The study presents 150 case studies in 15 horizontal and vertical sectors that illustrate the scope of current market adoption.

In addition to the main report, there are two addenda: a supplier directory, and an annotated bibliography.

About the Author

Mills Davis is founder and managing director of Project10X — a research consultancy specializing in next wave semantic technologies and solutions. The firm's clients include technology manufacturers, global 2000 corporations, and government agencies. Mills is a noted researcher and industry analyst, and is active in several government- and industry-wide initiatives that are advancing semantic technologies.

FREE SUMMARY

Download the free **Semantic Wave 2008** prospectus and executive summary at: <http://www.project10x.com/>