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Abstracts

(in order of presentations) May 20, 2010: subject to change

Conference day 1: June 10, 2010

What is information worth – the value of information in the innovation process - Erkki KM Leppävuori, VTT Technical Research Centre of Finland

Information is the lifeblood of innovation. Throughout the world companies, universities, research organizations as well as governments are working to discover new frontiers and create innovations for the world's economic and social progress. The growth of the body of information and the ease of access to information are unprecedented in human history. Yet paradoxically, effective management of information is more challenging than ever before. The ability to measure economic and social impacts of information utilization has not evolved much either.

Dr. Leppävuori discusses information utilization and its impacts in the innovation process, especially from the point of view of VTT Technical Research Centre of Finland and its clients

In search for continuous renewal - Mikko Kosonen, SITRA the Finnish Innovation Fund

"Five to ten years ago you would set your vision and strategy and then start following it. That does not work anymore. Now you have to be alert every day, week and month to renew your strategy". (Olli-Pekka Kallasvuo, Financial Times, 4 December 2006)

Companies have traditionally responded to change through strategic planning and the foresight offered by scenarios, or through corporate ventures and an entrepreneurial drive. Today's change is both fast and complex - where strategic planning no longer fits because change is fast and unpredictable.

In his keynote speech, Dr. Kosonen discusses the concept of strategic agility and the role of information utilization in enabling better strategic sensitivity, resource fluidity and leadership unity.

Case KONE - Jussi Oijala, KONE Corporation

KONE provides its customers with industry-leading elevators, escalators and innovative solutions for new buildings, modernization and maintenance, and is one of the global leaders in its industry. KONE has always been known as an innovative and growth oriented company. Over the years, KONE has proven its ability to adapt to a changing world as well as to create new opportunities for the company to grow. Mr. Oijala describes the innovation process of KONE and the role of effective utilization of existing information and emphasising of customer and end-user understanding. He also discusses the present and future challenges and opportunities brought along by opening up of the innovation process towards partners and suppliers as well as towards customers and end-users.

New information literacy – perspective of small and medium-sized enterprises - Mika Waris, National Board of Patents and Registration, Finland

Moving towards a knowledge based economy constitutes a real challenge to companies. The existing practices of utilizing valuable sources of technical, juridical and market information are inefficient, causing a lot of redundancy to R&D and problems in penetrating the market and staying there, especially for SMEs. Mika Waris discusses dissemination of information and national competitiveness. He talks about open innovation as well as instruments relating to the control and management of intellectual assets. He calls for a new approach to business and strategy planning for businesses to learn to identify, analyse and value their know-how and competencies, and the corresponding know-how of potential partners and competitors.

Innovation landscapes for Tekes programmes

- Laura Ruotsalainen, VTT Technical Research Centre of Finland and Raine Hermans, Tekes the Finnish Funding Agency for Technology and Innovation

Use of relevant and timely information brings competitive advantage. Patent and market data offers valuable information about business environment, e.g. trends and actors. The amount of data from various and non-uniform sources is exhausting and the format often difficult to adopt. By the use of professional skills and sophisticated tools this information can be transformed into a form easily understood and utilized. By combining the resources and expertise of three major actors of Finnish innovation field, Tekes, VTT Technical Research Centre of Finland and University of Jyväskylä, this is provided through the Innovaatiomaisemat-portal (Innovation landscapes), open for anyone.

Towards smart service: KISTI intelligent system using semantic web technology

- Hee-Yoon Choi, Korea Institute of Science and Technology Information

This presentation introduces the ever-leading edge of S&T Information service in KISTI (Korea Institute for Scientific & Technical Information), especially about smart service using semantic web technology, Ontoframe. Ontoframe is KISTI's semantic web-driven information service platform, being developed for better & intelligent access to S&T information at the first stage.

There are several public cases for using it, such as expert recommendation system, intelligent legislation support system and standard information service. It will be progressed to INScite(Intelligence in Science & Technology), a real-time service platform aiming to capture & disseminate technological information needed for strategic planning and decision making during R&D activities, and applied to NDSL(National Digital Science Links) at the end of this year. In this presentation, you will have an opportunity to hear about our efforts and experiences in developing those services.

Smart labs for smart people: New ways to collect, curate and share information

- Jeremy G. Frey, University of Southampton

Fundamental to collaboration in a scientific enquiry is the ability to share both the data and the methods used to analyse the data. The ideas of "Publication @ Source" for scientific data and workflows builds on the developments of the "Semantic Web" and the ideas of "Social Networking" to create new environments for scientific research. I will discuss the ideas behind the novel types of electronic notebooks used to create and capture high scientific investigations with high quality metadata and provenance and the ways in which communities can then share and trust these results to enhance further discovery and innovation.

Virtual work-flow tools to enhance the research process

- Lee-Ann Coleman, British Library

Understanding how scientific researchers work, enables information providers to provide intelligent, relevant products and services. Embedding these solutions in a researcher's workflow is central to a number of projects being undertaken by the Science, Technology and Medicine team at the British Library. Lee-Ann Coleman will provide an overview of projects that her team are delivering to achieve this aim. She will describe a virtual research environment for scientists, being developed in collaboration with Microsoft External Research and how this tool can help researchers to discover, organise, manage and share information throughout the lifecycle of a research project.

Innovations in multimedia search and retrieval

- Behrooz Chitsaz, Microsoft Corporation

Science is increasingly communicated through multimedia, yet multimedia sources have not historically lent themselves to robust search and retrieval with traditional search engine technology. In the case of audio and video, search results can be radically improved with audio indexing technology as opposed to the more limited metadata normally provided with such files. Scientific multimedia presents interesting challenges to audio indexing because of the highly-technical and specialized vocabulary. Microsoft Research will present its audio indexing technology and recent successes in extending this technology to scientific content through collaboration with ICSTI member organizations.

Sovereign within a Sovereign. Library of Congress on-line: Classification for a gateway to web resources?

- Jolande E. Goldberg, Library of Congress

The development of the new classification at the Library of Congress for *Indigenous Peoples in the Americas* initiated a new investigation of the enormous potential of the library's online classification, ClassificationWeb (ClassWeb), in particular the linking functionality of the system.

In her presentation, Dr. Goldberg, a pioneer in classification structures, covers the organization of the critical mass of information available, and pre-coordination of the data for content formulation, terminology and linking. She shows how with a well-designed user interface the system becomes a new bibliographic implement helping in direct access to digital subject content and delivering accurate search results.

Accelerating scientific discovery through openness and collaboration

- Jay Katzen, Elsevier Science and Technology Division

While technology is driving information overload for many researchers, it is simultaneously evolving to empower the scientific community. In the course of thousands of interviews with researchers and industry influencers, we saw an opportunity for Elsevier to fundamentally alter the relationship between scientific content and the way it is discovered, used, shared and re-used for scientific breakthroughs. This presentation explores an unprecedented approach that empowers the scientific community to actively collaborate on mechanisms for scientific research. We will share our plans for a platform that leverages the trusted content from Elsevier as well as third-party sources to accelerate knowledge discovery.

Conference day 2: June 11, 2010

Making open science real

- Adam Bly, Seed Media Groups

Science is becoming more open and digital — but without the necessary standards, organization, security, application interoperability, business model, or cyber-infrastructure to scale, be sustainable, and meet the needs of all stakeholders across the research community. How can information technology help us meet this challenge and ensure that open science becomes the way of the future?

Towards demand- and user-oriented innovation policy

- Petri Lehto, Ministry of Employment and Economy, Innovation Department

The government of Finland published its innovation strategy two years ago. Demand and user driven innovation was recognised as a key ingredient in increasing effectiveness of Finnish innovation policy. These new aspects of the policy bear a lot of promise yet their detailed content is under continuous elaboration.

What is common to both of these is that they both seek to enlarge innovation policy to areas currently untouched by policy, especially to strengthen users' ability to innovate and increase innovation where global societal challenges arise.

Dr. Lehto discusses the contents of demand and user driven innovation policy and directions where Finland aims to take the policies.

The Fourth Paradigm: Data-intensive scientific discovery

- Tony Hey, Microsoft Research

Dr. Hey describes the emergence of a new, 'fourth paradigm' for scientific research involving the acquisition, management and analysis of vast quantities of scientific data. This 'data deluge' is already affecting many fields of science most notably fields like biology, astronomy, particle physics, environmental science and oceanography. The term eScience or eResearch is used to describe the development of the tools and technologies to support this more data-intensive, collaborative and often multidisciplinary research. This revolution will not be confined to the physical sciences but will also transform large parts of the humanities and social sciences as more and more of their primary research data is now being born digital. The new paradigm of data-intensive scientific discovery will have profound implications for how researchers 'publish' their results and for scholarly communication in general. What will need to be preserved, how will this be accomplished? Research libraries have the opportunity to play a leading role in this ongoing revolution in digital scholarship.

WorldWideScience.org: Extending global reach through multilingual translation
- Walter Warnick, U.S. Department of Energy, Office of Scientific and Technical Information

Since its launch at the 2007 ICSTI conference, where it searched national databases in 10 countries, WorldWideScience.org has grown to searching databases in over 60 countries, representing 80 percent of the world's population. Still, up until now, real-time technology constraints have limited WWS.org to English-only queries and sources. With the launch of Multilingual WorldWideScience.org, users can find non-English content in vast reservoirs of scientific knowledge, including Russian and Chinese, and have results translated into their native language -- all in real-time. Opening this access to both non-English content and queries supports WWS.org's goal to accelerate scientific discovery and progress.



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