Tietotieteen vuosikymmen

se mennyt... ja se tuleva

Ilkka Tuomi

Tämä nyt tosin on ehkä hieman persoonallinen näkökulma

The story, fourteen years after...

14 vuotta sitten...

- In 1992, Nokia went through a major upheaval, and Nokia Telecommunications changed its management.
  - Mikko Kosonen was appointed as developer of the NTC strategy, and his responsibilities included information systems. Tuomo Huhtanen was nominated as the head of IT in NTC. Nokia was thinking of integrating information systems across its business units (NTC, NMP, NCE, ...)
  - It was impossible to send email from one business unit to another, except with 7-bit ascii.
- In early summer 1992, Tuomi gave a public lecture on organizational modeling and corporate strategy. After the lecture, Tuomo Huhtanen pointed out that there might now be some possibility to do innovative IS within Nokia. Tuomi was given the opportunity to be a "fly on the wall" to develop some ideas on how to use IS in NTC.

Enter knowledge management ...

- In Autumn 1992, NRC set up the first Notes server and started to do some tests with patent abstracts and business news that were processed from downloaded Ascii files using Perl. The resulting demonstrations were shown to NMP and NTC, and developed into pilot project plans.
  - One pilot was for *Global Tendering* (as a "next-generation" logistics system). Another pilot was an information and collaboration environment for business intelligence, also known as *Strategy Information Refinery*.
  - Based on these early pilots, Nokia Research Center set up a *Collaboration Competence Centre* with NMP and NTC.
- "The main function of the CCC is to help BUs in ensuring that potentially critical and high value collaboration technologies are taken into use in BUs at the right time."
- …yes, we played with Mosaic, too.

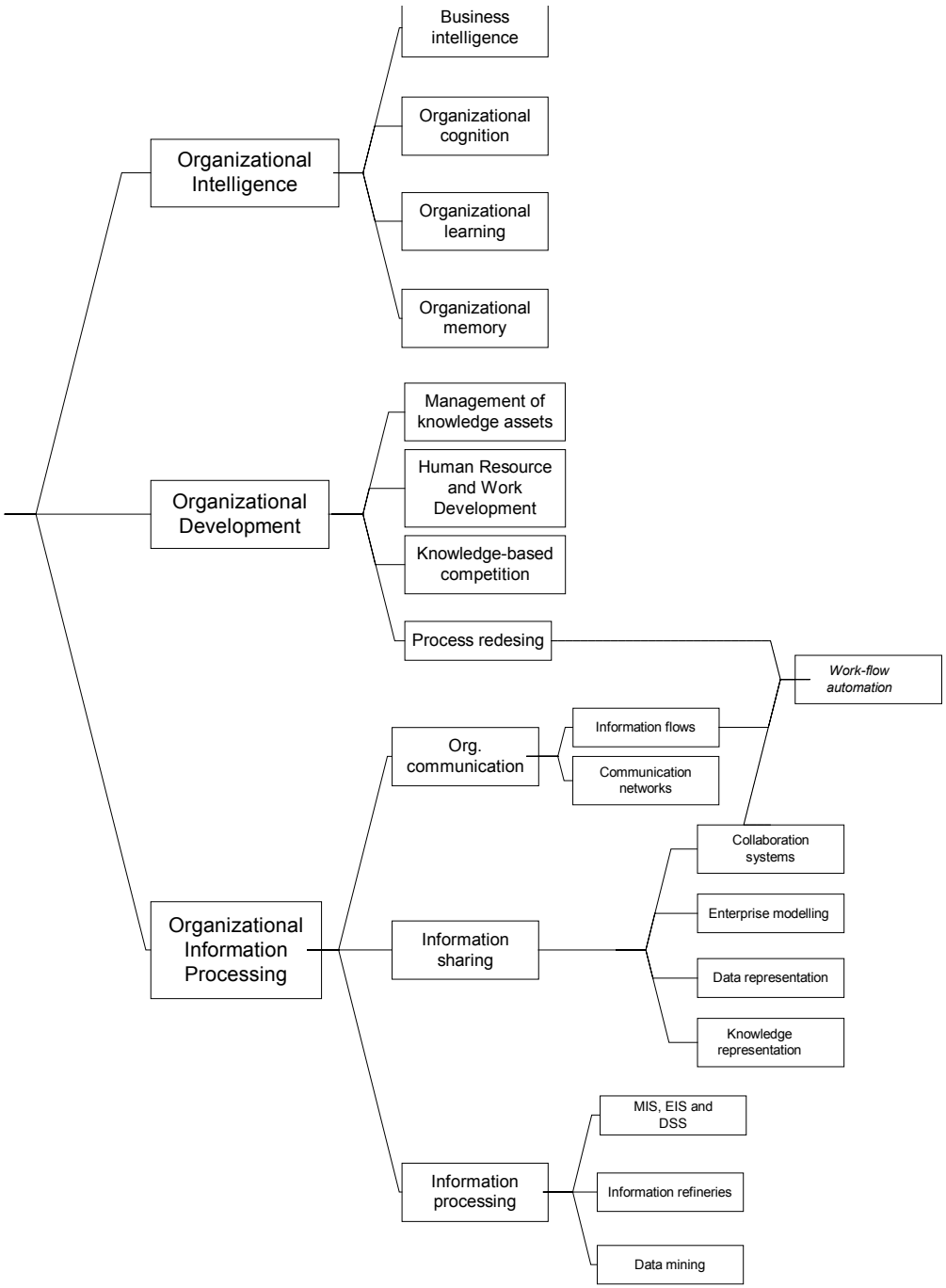
Collaboration Competence Centre

- From the beginning, **social** is part of the story
  - ”In addition, skillful introduction of information system support for collaboration requires emphasis and understanding of **social and human aspects of information systems and organisational development**”

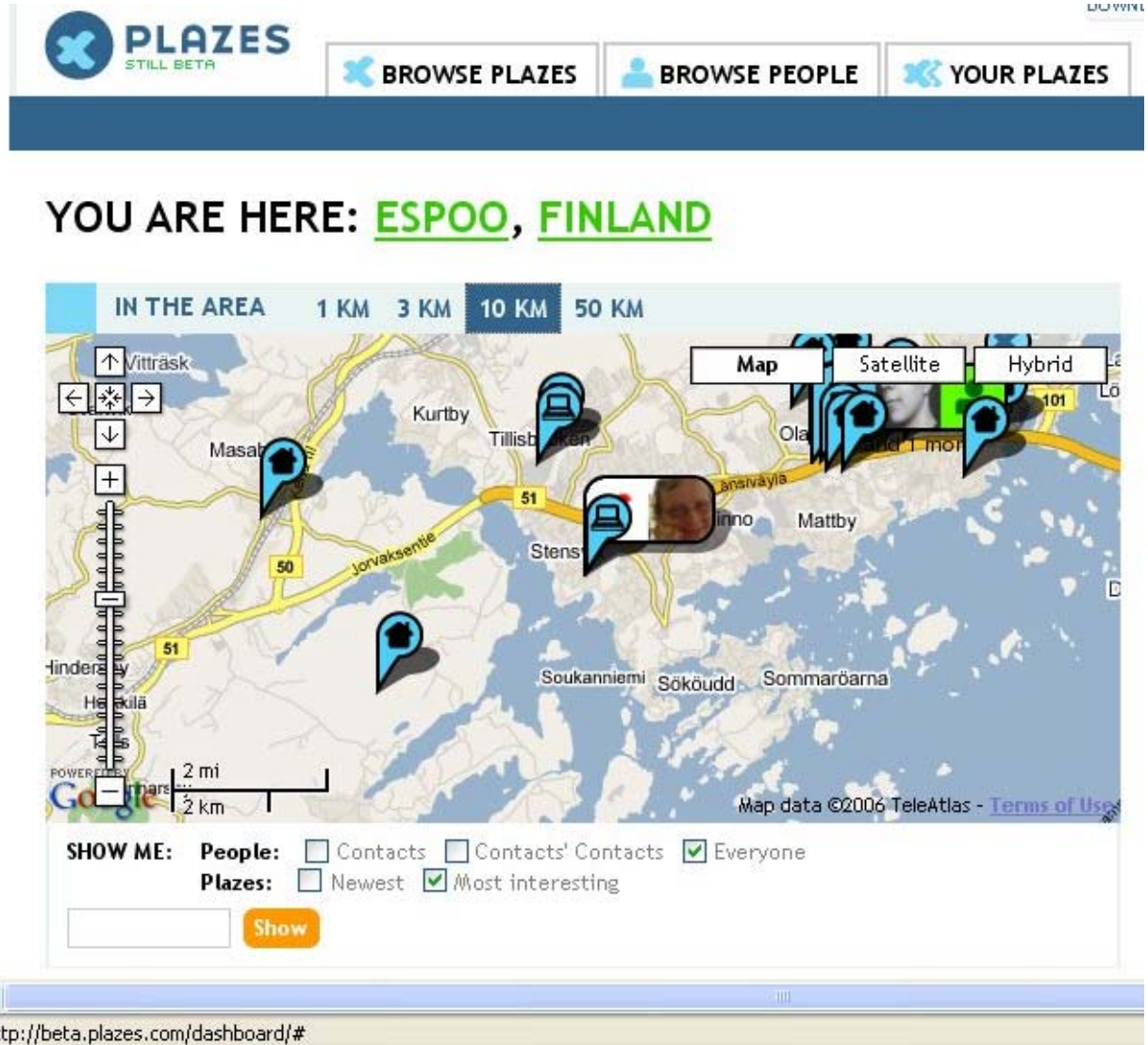
- ..."the competence centre can define its domain of activity as:

  Information technology supported collaboration, with emphasis on better use, re-use and refining of internal and external knowledge, for geographically distributed and dynamic groups”

Project Steering Group Minutes, 1994


Business intelligence
Organizational cognition
Organizational learning
Organizational memory
Organizational Intelligence
Management of knowledge assets
Human Resource and Work Development
Knowledge-based competition
Process redesing
Organizational Development
Work-flow automation
Information flows
Org. communication
Communication networks
Collaboration systems
Enterprise modelling
Information sharing
Data representation
Knowledge representation
Organizational Information Processing
MIS, EIS and DSS
Information refineries
Information processing
Data mining

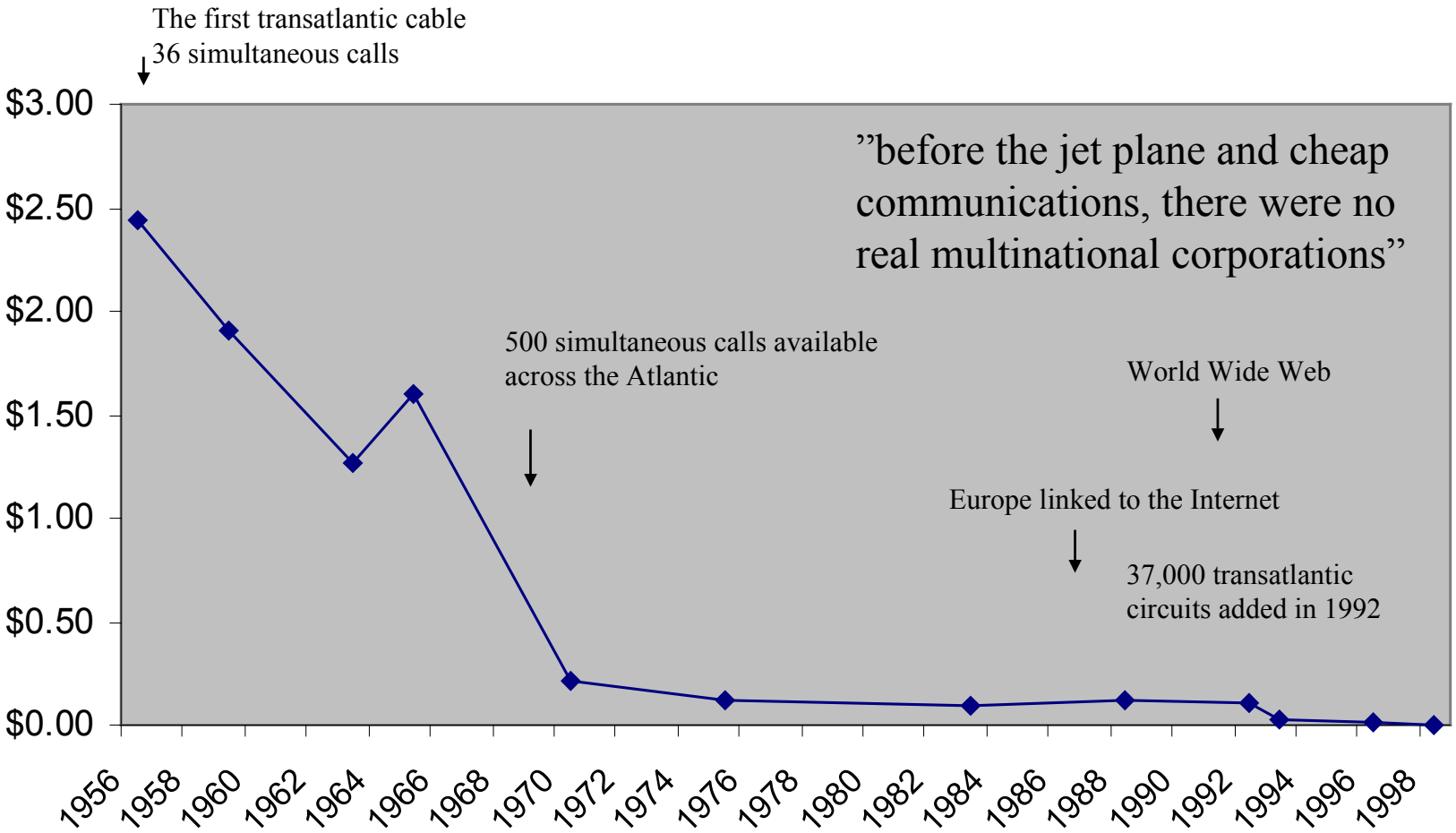
Mitä siis opimme?



Rewriting Marx & Engels

The knowledge society, by the rapid improvement of all instruments of production, by the immensely facilitated means of communication, draws all individuals, organizations, and institutions, even the most barbarian, into constant revolution.

The Third Globalization, Driven by Global Communications



Investment cost of transatlantic cable per minute of use

Schumpeter I-II: "the gales of creative destruction"

I

1. Scientists and innovators create technological opportunities
2. Entrepreneurs see the profit potential of technological opportunities and grab them
3. Followers swarm in and erode profits

- In the process, investments are made in the emerging technologies, and industry and market structure change

(Theory of Economic Development, 1912)

II

- Big corporations become main investors in technology creation

(Capitalism, Socialism and Democracy, 1943)

“Schumpeter” III-IV

III

- A global sphere of financing emerges
- Venture capitalists become an important engine of re-engineering
- Investments “swarm” to fastest growing industries
- Options are invented
- Big corporations try to renew by acquisitions, innovation management, and internal venturing

IV

- Internet changes the balance between labor and capital
- Mature industries live in Schumpeter II (+III)
- New businesses emerge in Schumpeter III
- Social institutions are adapted to Schumpeter II, except in the Silicon Valley

“Schumpeter” V

- Collective production of technology and experience
  - open source SW, blogs, social software with images, music, games…
- Loosely coupled to economic investments and interests
- Requires broadband networks
- “Symbiotic economy”
- New rules for competition
- New “medieval villages” of the Internet

Towards the New Economy of Meaning

- The social and cultural infrastructure is becoming increasingly important
- Diversified communities interact across global networks
- Value is created by communications that produce meaningful social interactions
- The traditional epistemology of the information processing paradigm (objective, empirical, universal) will be replaced by a new epistemology
  - It will be based on theories of social construction, hermeneutic phenomenology, linguistic genres, communities of practice, situated & distributed cognition, socio-cultural activity theory…
- The design of future ICT architectures and applications will require new types of knowledge and new types of collaboration across scientific disciplines

The social foundation of knowing and knowledge creation

- M. Bakhtin (1930's): linguistic "genres" and "chronotype"
- L. Fleck (1935): "thought communities"
- D. Schön (1983): "communities of reflective practitioners"
- E. Constant (1980, 1984, 1987): "communities of practice"
- Y. Engeström (1987): "activity systems"
- Lave & Wenger (1991): "communities of practice"
- Brown & Duguid (1991, 2000): "communities of practice," "networks of practice"

Knowledge is practice-related and activity-oriented

•articulated in a social process,
•learned through socialization,
•reflected in the conceptual systems that are used in interpreting the world,
•partially embedded in material and technical artifacts,
•and often not explicitly articulated

Dialogi Ikujiro Nonakan kanssa

- Tuomi: How did you end up with the concept of ba? How and why is it so important in knowledge creation? What is the historical origin of this concept in your thinking? It was not in the first book *The Knowledge Creating Company*. Yet you mention Nishida several times in it. Does your philosophy of knowledge creation start with the Kyoto school and did the concept of ba come from there?
- Nonaka: I will try to explain as much as I can. About the concept of ba.
- In 1995 it is clear that we didn't talk about the concept of ba. But after my field research it occurred to me that the SECI process does not occur in a vacuum. It occurs in a specific context. Knowledge is in a sense information in a context. It is contextual, that's why it generates meaning. From there I introduced the concept of ba. Our definition of the concept of ba is a shared context in motion. Knowledge needs context. Without context to specify time, place and relationship with others it's just information. Ba is a context that is shared by participants to create meanings. Participants understand the context of others and oneself and through interaction create the context. Hence it's constantly moving. The key to understand the context is interaction. It does not reside in one's mind, contexts are shared and created through interaction. That's the basic idea I tried to introduce.

Tästä syystä semanttinen web ei tule onnistumaan

- ”Universal resource indicator” (URI) ei voi viitata asioihin, joihin ei voi viitata.
- Hiljaiseen tietoon, esimerkiksi, on hankala viitata.

Polanyi:

- ”... the functional structure of from-to knowing includes jointly a subsidiary ’from’ and the focal ’to’. But this pair is not linked together on their own accord. The relation of a subsidiary to a focus is formed by the *act of a person* who integrated one to the other. The from-to relation lasts only so long as a person, the knower, sustains this integration.”
- ...”Such integration cannot be replaced by any explicit mechanical procedure...It can only be lived, can only be dwelt in.”

» Polanyi, M. & H. Prosch (1975) Meaning.The University of Chicago Press, pp.38-41.

Mikä on tämän merkitys …

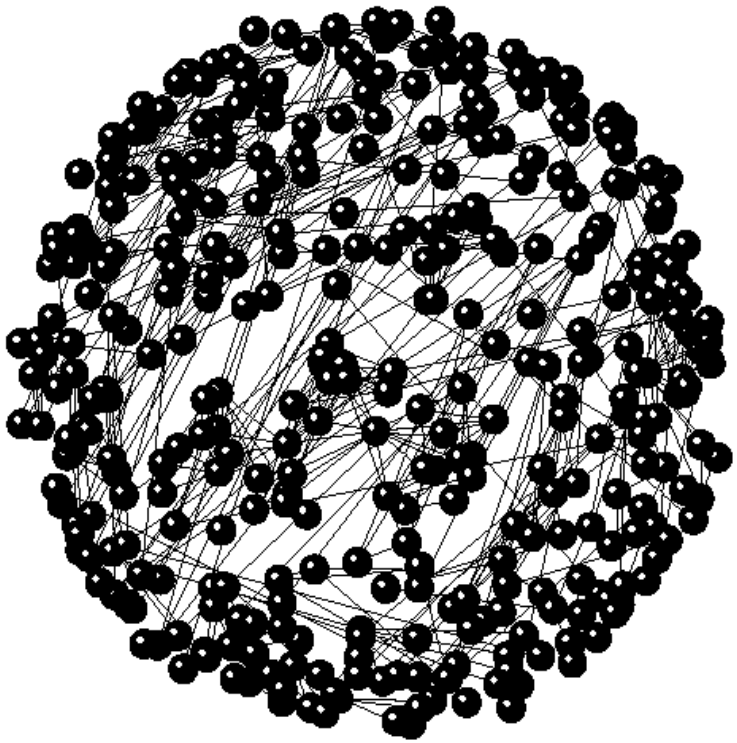
And God made the beast of the earth after his kind, and cattle after their kind, and every thing that creepeth upon the earth after his kind

- 1:24. Ja Jumala sanoi: "Tuottakoon maa elävät olennot, kunkin lajinsa mukaan, karjaeläimet ja matelijat ja metsäeläimet, kunkin lajinsa mukaan". Ja tapahtui niin:
  1:25. Jumala teki metsäeläimet, kunkin lajinsa mukaan, ja karjaeläimet, kunkin lajinsa mukaan, ja kaikki maan matelijat, kunkin lajinsa mukaan. Ja Jumala näki, että se oli hyvä.

- ja sama uuden käännöksen mukaan:
  - *24* Jumala sanoi: "Tuottakoon maa kaikenlaisia eläviä olentoja, kaikki karjaeläinten, pikkueläinten ja villieläinten lajit." Ja niin tapahtui.
  - *25* Jumala teki villieläimet, karjaeläimet ja erilaiset pikkueläimet, kaikki eläinten lajit. Ja Jumala näki, että niin oli hyvä.

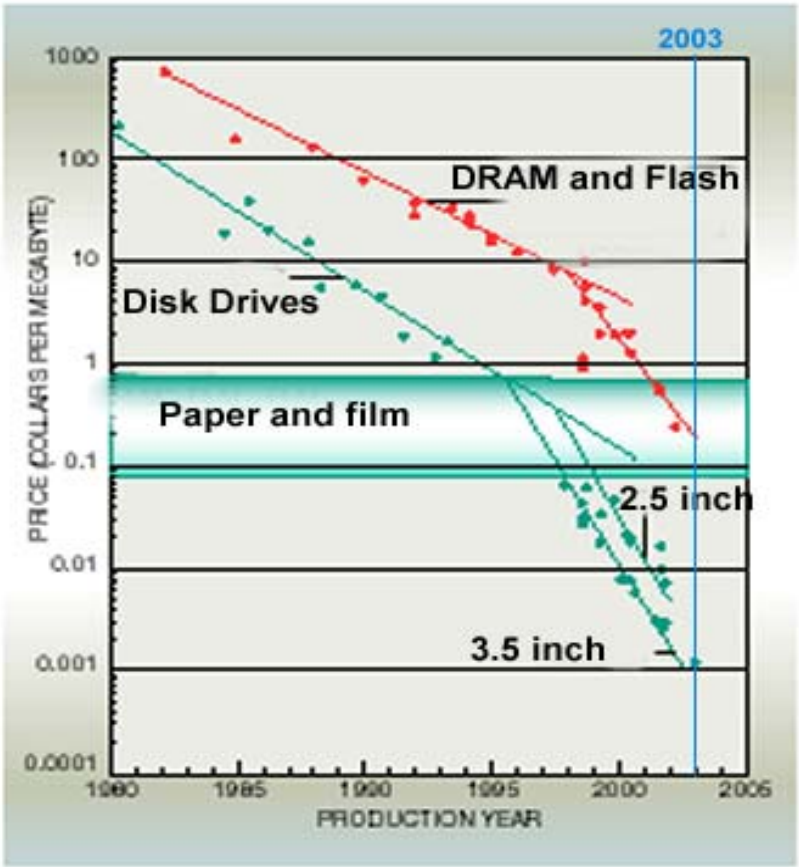
Mikä siis on tämän merkitys …

Location Matters: The founders of Silicon Valley semiconductor firms



Castilla, E.J., Hwang, H., Granovetter, E., & Granovetter, M. (2000). Social networks in Silicon Valley. In C.-M. Lee, W.F. Miller, M.G. Hancock, & H.S. Rowen (Eds.), *The Silicon Valley Edge* (pp. 218-247).

Price per Megabyte



Source: Grochowski & Halem (2003) Technological impact of magnetic hard disk drives on storage systems. IBM Systems Journal 42(2).

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http://www.learner.org/resources/series75.html#

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Teacher Resources/Foreign Language

Overview

Destinos:
An Introduction to Spanish

A video instructional series in Spanish for college and high school classrooms and adult learners; 52 half-hour video programs, audiocassettes, music CD, video and audio scripts, and coordinated books

Now on DVD

Destinos teaches speaking, listening, and comprehension skills in Spanish. This *telenovela,* or Spanish soap opera, immerses students in everyday situations with native speakers and introduces the cultures, accents, and dialects of Mexico, Spain, Argentina, and Puerto Rico. Understanding of Spanish and appreciation of many Hispanic cultures increase as students become absorbed in the mysterious and entertaining story. Closed captioning in Spanish can be used as a teaching and literacy resource. The series is also appropriate for teacher professional development.

Produced by WGBH Boston. 1992.

CC **ISBN:** 1-55946-527-1

Liliana Abud as "Raquel"

VoD *Look for this icon to play FREE video.*

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http://www.learner.org - Video on Demand - M...

Annenberg Media Learner.org

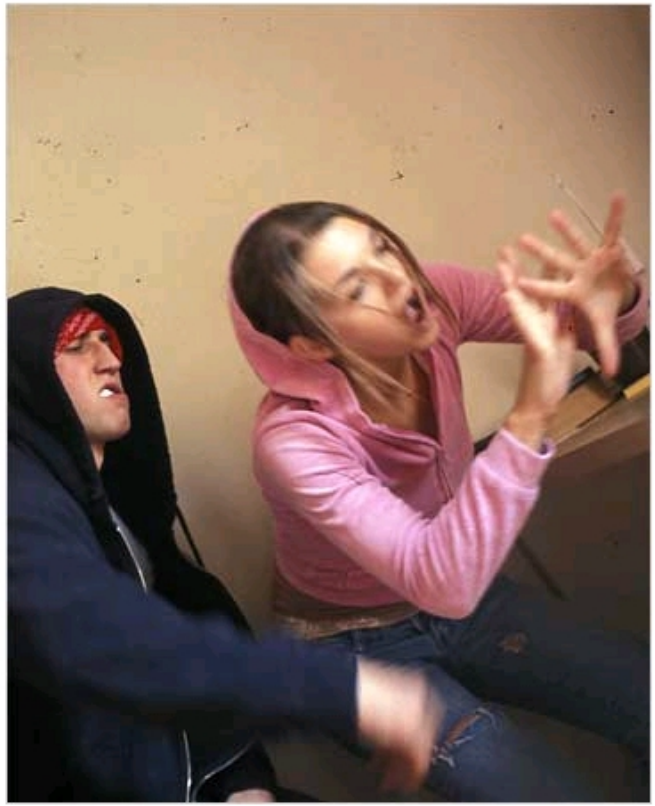
Individual Program Descriptions

1. Unit I
Vocabulario: cognates; family members.
Gramática: ser; articles and gender, possession.

Lonelygirl15 and Daniel have a party

http://www.nytimes.com - The New York Times > Business > I...

The New York Times September 13, 2006



Grant Steinfeld

Bree and Daniel as they appeared in an episode of Lonelygirl15 on June 27

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lonelygirl15 Channel

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lonelygirl15
Age: 103
Country: United States

Channel Views: 4,282,876
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Here is Daniel's profile
http://www.youtube.com/user/Da nielbeast

I have a MySpace now!!!
http://www.myspace.com/lonelyg url15

#29 - Most Viewed Channels (This Week)
#1 - Most Viewed Channels (This Month)
(more)

About Me
Name: Bree
Member Since: 4 months ago
Videos Watched: 7,503
Last Login: 8 hours ago

THANKS for all the nice comments! :)

What can I say? Hmmm. My friend Daniel helped me set up this account and he helps me out with the videos (he's kinda a computer genius).

I'm homeschooled, so I guess that makes me a

”Pensioner becomes latest YouTube star”

Will Head, vnunet.com 15 Aug 2006

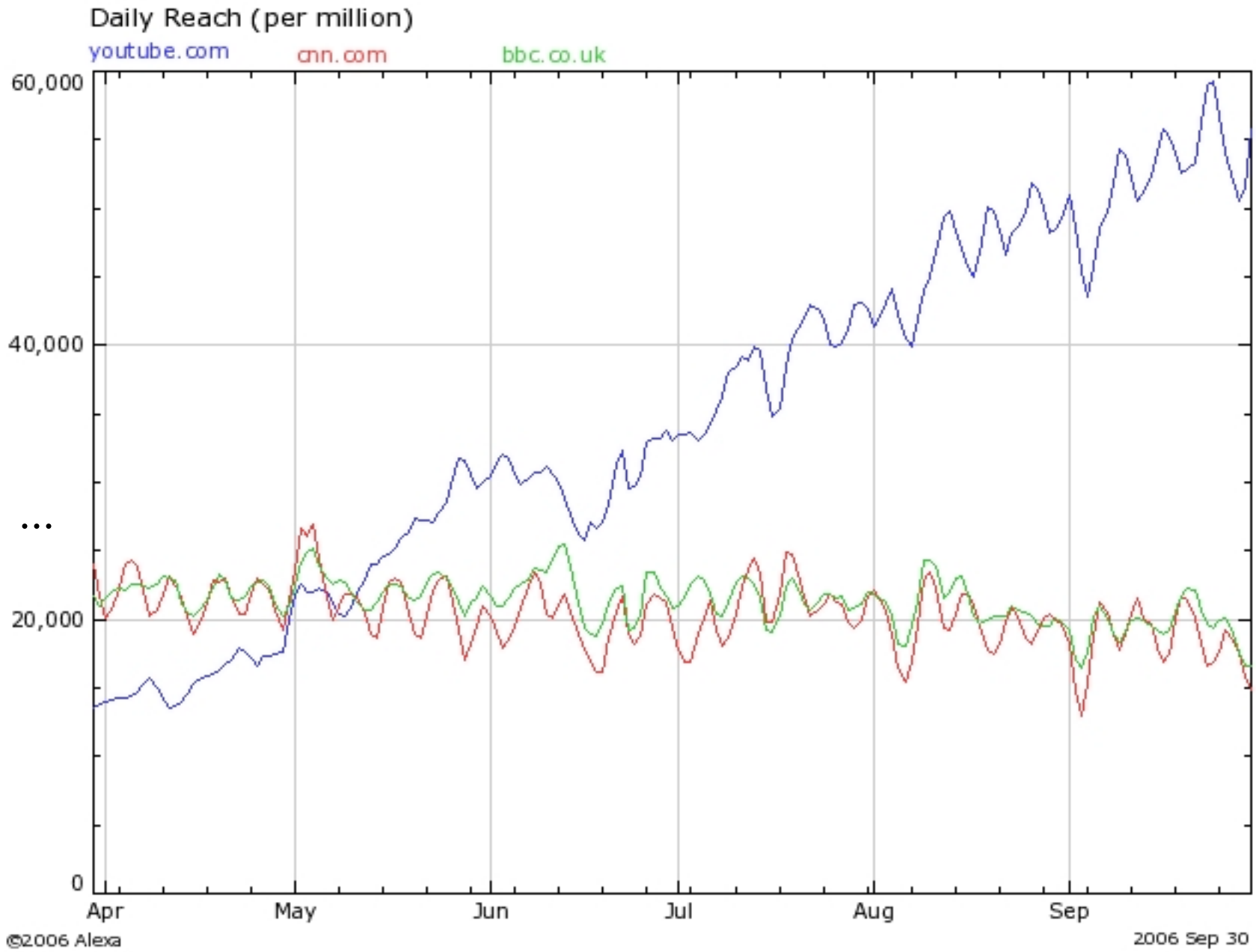
An old age pensioner has become the latest star of teen-oriented video sharing site YouTube.

'Peter', who goes by the username Geriatric1927, is a 78 year-old widower from England who promises "geriatric gripes and grumbles".

His first video has been viewed over 850,000 times since it was uploaded on 5 August.

"I got addicted to YouTube. It's a fascinating place to go to see all the wonderful videos young people have produced. So I thought I'd have a go at doing one myself," Peter said in his first video.

Over 14,000 people have subscribed to Peter's video feed and he is ranked among the top users currently on the site. His video feed is the third most subscribed to in the history of YouTube.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Don't Just Watch, Dive In

Take control of YouTube! When you register, you can create a personal video collection, hook into the YouTube community, and share your work with the world.

Register Now

Sign me up!

Personalize

Keep track of your favorites:

- Subscribe to users and tags—have videos delivered
- Start a Favorites list
- Categorize favorites with Playlists
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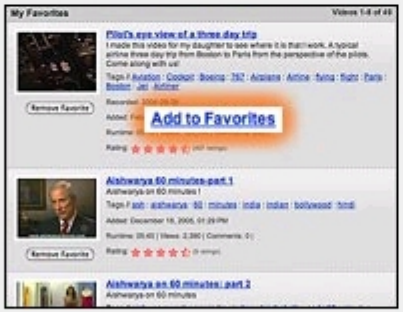
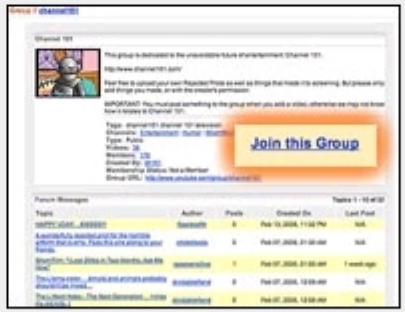


Show me more

Commune

Interact and share with other users:

- Join Groups with common interests
- Comment on and rate videos
- Send messages
- Share private videos with friends and family

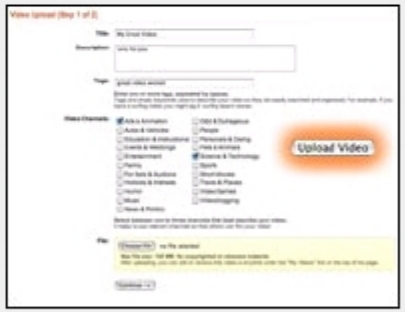


Show me more

Create

Broadcast your videos worldwide:

- Upload and tag your creations
- Email them to friends
- Link to your video from any website
- Embed your video in selected websites



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But the story counts…

- Lonelygirl15 on YouTube, 4.2 million viewers

The Lonelygirl That Really Wasn't

By VIRGINIA HEFFERNAN and TOM ZELLER Jr.
Published: September 13, 2006

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THE LAST KING OF SCOTLAND
NOW PLAYING

A nearly four-month-old Internet drama in which the cryptic video musings of a fresh-faced teenager became the obsession of millions of devotees — themselves divided over the very authenticity of the videos, or who was behind them or why — appears to be in its final act.

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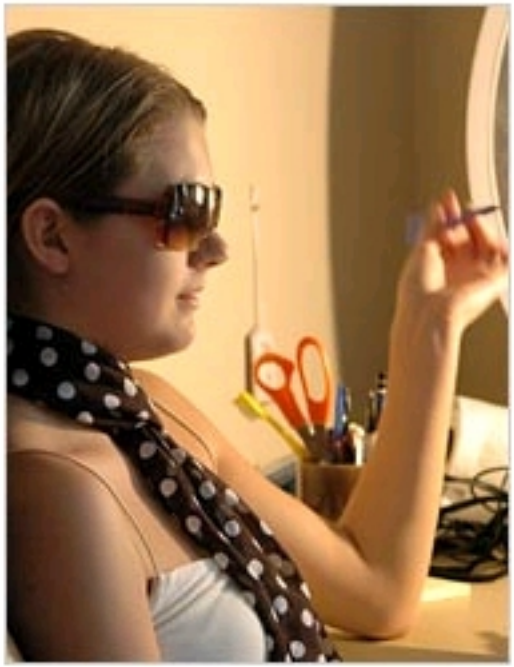

Grant Steinfeld

The woman who plays Lonelygirl15 on the video-sharing site YouTube.com has been identified as Jessica Rose, a 20-ish resident of New Zealand and Los Angeles and a graduate of the New York Film Academy. And the whole project appears to be the early serialized version of what eventually will become a movie.

Matt Foremski, the 18-year-old son of Tom Foremski, a reporter for the blog Silicon Valley Watcher, was the first to disinter a trove of photographs of the familiar-looking actress, who portrayed the character named Bree in the videos. The episodes suggested Bree was the home-schooled

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Hello there! Sign in. English (Change?) Skype. T

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Press releases

MCAFEE, INC. AND SKYPE COLLABORATE

On August 03, 2006.

Skype Certifies McAfee Internet Security Suite 2006

Luxembourg & Santa Clara, Calif., August 3, 2006 – McAfee, Inc. (NYSE:MFE), the global leader in Intrusion Prevention and Security Risk

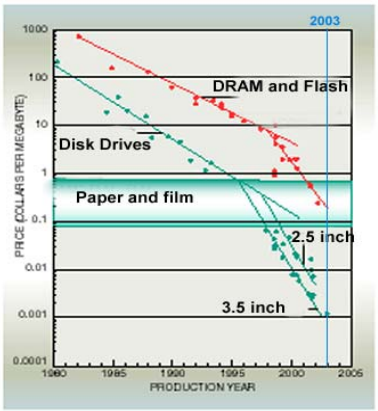
Skype's encryption technology.

d we want our community to use their computers in the safest way possible, which includes having virus protection," said Kurt Sauer, Skype's Chief Security Officer. "Skype is already very secure, and McAfee's products are complementary, securing the rest of the PC environment."

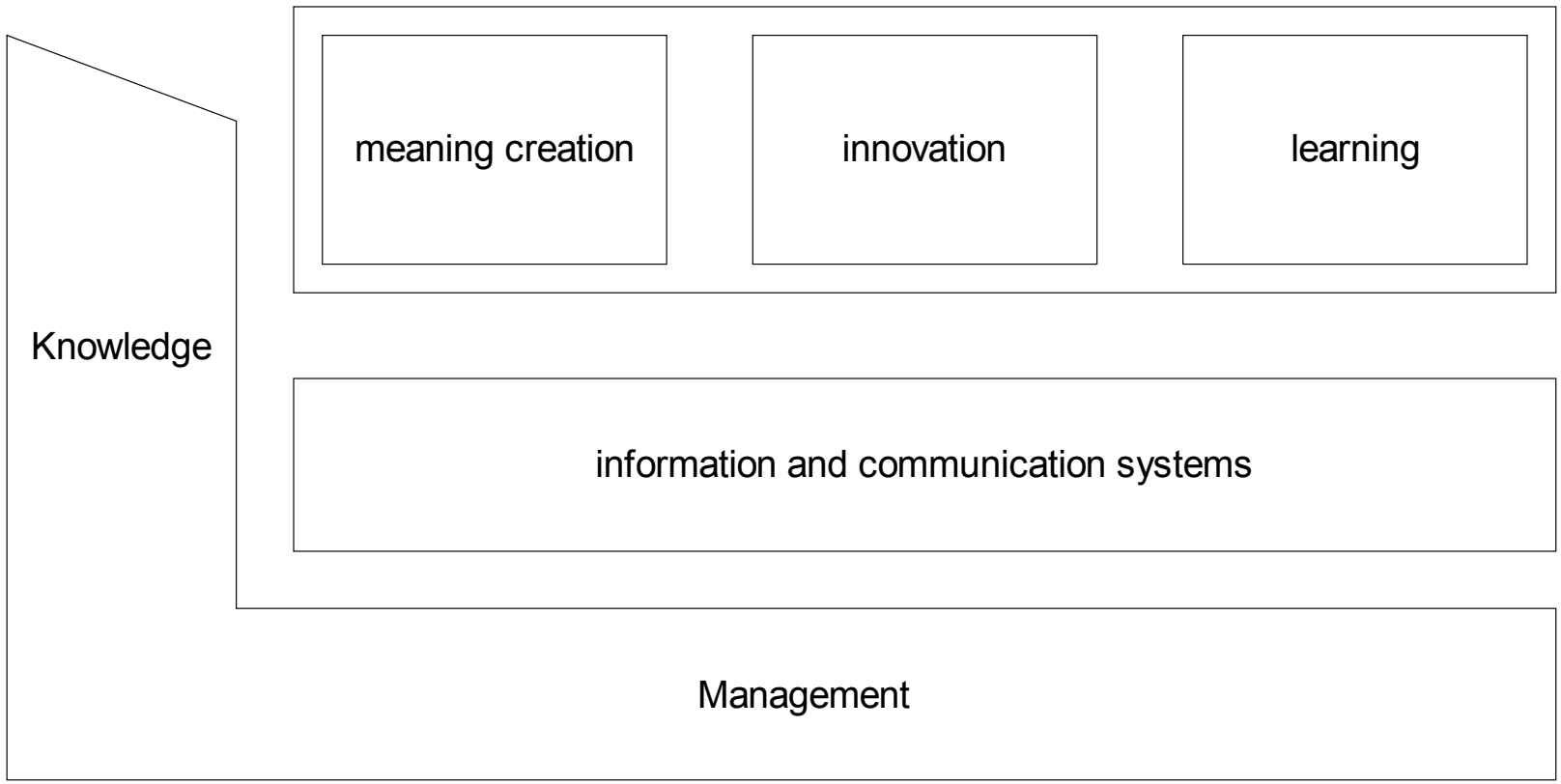
Oppimisen vallankumous

Informaalista sosiaalisesta oppimisesta tulee tärkein osaamisen kehittymisen muoto

The complex map of reality
"You are here"



The four blocks of KM



Kiitos!

http://www.meaningprocessing.com/personalPages/tuomi/