

707.009  
Foundations of Knowledge Management  
„Overview and Motivation“

**Markus Strohmaier**

Univ. Ass. / Assistant Professor  
Knowledge Management Institute  
Graz University of Technology, Austria

e-mail: [markus.strohmaier@tugraz.at](mailto:markus.strohmaier@tugraz.at)  
web: <http://www.kmi.tugraz.at/staff/markus>

## Overview

### Agenda

- Welcome
- Motivation
- About me
- Course overview
- KM Background

## Motivation [Yu 2007]

### Why the recent interest in KM?

- Intellectual content in products and services
  - E.g., a pair of jeans, aluminum pop can, microchip
- Factors of production: land, labour, capital
  - Now, also: information and knowledge
- Success, survival rely on innovation, differentiation
  - Intangible asset – hard to “manage”
- “Intellectual capital”
  - Human resources – recruiting, training, learning, retention

## Knowledge Management - Motivation

*“The 20th anniversary of the landing of an American on the surface of the Moon occasioned many bittersweet reflections. Sweet was the celebration of the historic event itself... **Bitter, for those same enthusiasts, was the knowledge that during the twenty intervening years much of the national consensus that launched this country on its first lunar adventure had evaporated...**”*  
[Fries, S. 1992].



Courtesy of [Dr. Paul Kwan](#), University of New England, [Knowledge Management Systems comp292/comp592]

Copyright © NASA, Apollo 11 mission

## Why YOU should you learn about KM [Yu 2007]

Most KM initiatives presuppose technology support.

- **You (computer scientists) are expect to provide it.**
- Do we have the right methods and tools?

There has actually been a “Knowledge” movement within the computer science area for a long time, since the '70s, long before it became a management “fad” in the business community.

- How do knowledge concepts in technology systems help us understand knowledge in human social systems?

Software engineering work is itself knowledge-intensive.

- We should apply KM concepts to analyze and improve software engineering – software development, deployment, evolution, etc.

Often, software projects do not fail because of technological reasons

- Abandoned discussion forums, blogs, wikis, etc

## About me

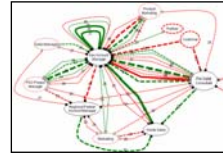
### Education:

- 2002 - 2004 PhD. in Knowledge Management, Faculty of Computer Science, TU Graz
- 1997 - 2002 M.Sc., Telematik, TU Graz

### Background:

- July 2007 - present: Ass. Prof. (Univ.Ass.), TU Graz, Austria
- 2006 - 2007 Post-Doc, University of Toronto, Canada
- 2002 - 2006 Researcher, Know-Center, Austria

## About me



### Research Background:

- Business Process Oriented Knowledge Management
- Knowledge Infrastructure Development
- Agent-Oriented Early Requirements Engineering

### Research Interests:

- Web Science with a focus on networks, Social Computing and knowledge transfer
- Intentional Structures and Representations on the Web

### Interesting topics for projects, Bachelor/Master/PhD thesis:

- If you are interested in the topics of this course, it is likely that you are interested in doing a project / a thesis with me as well. **Contact me to discuss opportunities.**



## Course Topics

- Knowledge types and processes
- Knowledge management strategies
- Knowledge organization
- Knowledge bases
- Knowledge acquisition
- Knowledge transfer
- Organizational knowledge repositories
- ... and others

## Goals I

**At the end of the course,**

you should **know about and understand** different

- kinds of knowledge
- types of knowledge transfer
- Perspectives on knowledge management
- types of knowledge organization
- types of knowledge acquisition techniques
- types of knowledge repositories
- types of knowledge-based analysis techniques

And you should **be able**

to distinguish between them, preliminarily assess their relevance for given contexts and apply them selectively

## Non-Goals

In the research community, there is **no broad consensus** regarding the theoretical foundations of a „Scientific Discipline of Knowledge Management“

So therefore, the topics of this course are **subjectively selective**.

Instead of giving an authoritative account of KM, this course aims to give an overview of **prominent, interesting and powerful research results** generated by the field of KM so far.

## Course Context

- 707.009 Foundations of Knowledge Management
  - 1st year as a VL
  - Has been held before as a VU
- Part of studies „Software Engineering & Business“
  - Master studies, 7th semester
- This course is a pilot
- Your feedback is appreciated

## Course Organization and Logistics

- **Lectures**  
*Thursdays 13:15 - 14:45,  
October 2007 - January 2008,  
Room HS Modul (Inffeldgasse 21a, Ground Floor)  
except for the first two weeks, where it is held in HS i7*
- **Website:** [http://kmi.tugraz.at/staff/markus/courses/707.009\\_knowledge-management/](http://kmi.tugraz.at/staff/markus/courses/707.009_knowledge-management/)

**Enroll!**

In order to obtain a grade, you need to enroll for this course until Oct 10 2007 via TUG online!

- **Weekly Readings**  
Password to access protected documents on the course website:

## Grading

So how do you receive a grade in this course?

- You are supposed to take the final exam at the end of the course.

What will be part of the exam?

- Contents of slides **AND** weekly readings.

How does class attendance affect your grade?

- Each week we will discuss issues from the weekly readings.
- The papers discussed in the weekly readings will be part of the final exam
- Participating will likely increase your understanding of the subject.

## Course Information

Please find **everything** about the course at

- <http://www.kmi.tugraz.at/staff/markus/courses/>

## Recommended Literature

There is no required text book for this course, however you might find it helpful to have a look at the following resources:

- Knowledge Management Systems, R. Maier, Springer Publishing, 2007
- Knowledge Management - Processes and Technologies, H. Rollett, Kluwer Academic Publishing, 2003
- An Illustrated Guide to Knowledge Management (For Practitioners), Knowledge Management Forum Graz, 2003
- Plus literature listed on the course website (weekly readings)

## Questions?

Raise them **NOW!**

Or ask them later:

- At the end of each class
- Via e-mail: markus.strohmaier @ tugraz.at

(now would be a good time though)

# Let's start!

## - Knowledge Management -

## Knowledge in Computing & Info Systems [Yu 2007]

Trend is toward (increasingly explicit) “knowledge representation” in systems

- Programs 1960's-
- Database schemas (data independence from programs) 1970's-
- Conceptual data modeling (domains, enterprises) 1980's-
- Knowledge-based systems (knowledge about world separate from inference engine) 1980's-
- Knowledge sharing among systems (“ontologies”) 1990's-
- Software agents 1990's-
- Semantic web 2000's-
- ...

## How much information is being produced?

<http://www2.sims.berkeley.edu/research/projects/how-much-info-2003/>

- Print, film, magnetic, and optical storage media **produced about 5 exabytes of new information in 2002**. Ninety-two percent of the new information was stored on magnetic media, mostly in hard disks.
- We estimate that the amount of new information stored on paper, film, magnetic, and optical media has about **doubled in the last three years**.
- Information flows through electronic channels -- telephone, radio, TV, and the Internet -- contained almost 18 exabytes of new information in 2002, **three and a half times more than is recorded in storage media**. 98 percent of this total is the information sent and received in telephone calls - including both voice and data on both fixed lines and wireless.



## How much information is being produced?

<http://www2.sims.berkeley.edu/research/projects/how-much-info-2003/>

In 2003

- The World Wide Web contains about **170 terabytes** of information on its surface; in volume this is **seventeen times** the size of the Library of Congress print collections.
- Instant messaging generates **five billion messages a day** (750GB), or 274 Terabytes a year.
- Email generates about **400,000 terabytes** of new information each year worldwide.
- P2P file exchange on the Internet is growing rapidly. Seven percent of users provide files for sharing, while 93% of P2P users only download files. The largest files exchanged are video files larger than 100 MB, but the most frequently exchanged files contain music (MP3 files).



# How much information is being produced?

<http://www2.sims.berkeley.edu/research/projects/how-much-info-2003/>

**Table 1.2: Worldwide production of original information, if stored digitally, in terabytes circa 2002. Upper estimates assume information is digitally scanned, lower estimates assume digital content has been compressed.**

Storage Medium	2002 Terabytes Upper Estimate	2002 Terabytes Lower Estimate	1999-2000 Upper Estimate	1999-2000 Lower Estimate	% Change Upper Estimates
Paper	1,634	327	1,200	240	36%
Film	420,254	76,69	431,690	58,209	-3%
Magnetic	5187130	3,416,230	2,779,760	2,073,760	87%
Optical	103	51	81	29	28%
<b>TOTAL:</b>	<b>5,609,121</b>	<b>3,416,281</b>	<b>3,212,731</b>	<b>2,132,238</b>	<b>74.5%</b>

Source: *How much information 2003*

# How much information is being produced?

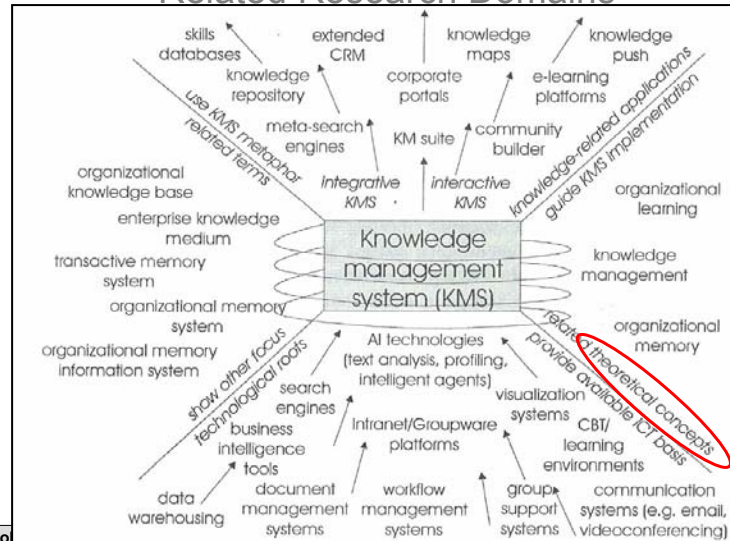
<http://www2.sims.berkeley.edu/research/projects/how-much-info-2003/>

**Table 1.1: How Big is an Exabyte?**

<b>Kilobyte (KB)</b>	1,000 bytes OR $10^3$ bytes 2 Kilobytes: A Typewritten page. 100 Kilobytes: A low-resolution photograph.
<b>Megabyte (MB)</b>	1,000,000 bytes OR $10^6$ bytes 1 Megabyte: A small novel OR a 3.5 inch floppy disk. <b>2 Megabytes: A high-resolution photograph.</b> 5 Megabytes: The complete works of Shakespeare. 10 Megabytes: A minute of high-fidelity sound. 100 Megabytes: 1 meter of shelved books. 500 Megabytes: A CD-ROM.
<b>Gigabyte (GB)</b>	1,000,000,000 bytes OR $10^9$ bytes <b>1 Gigabyte: a pickup truck filled with books.</b> 20 Gigabytes: A good collection of the works of Beethoven. 100 Gigabytes: A library floor of academic journals.
<b>Terabyte (TB)</b>	1,000,000,000,000 bytes OR $10^{12}$ bytes 1 Terabyte: 50000 trees made into paper and printed. 2 Terabytes: An academic research library. <b>10 Terabytes: The print collections of the U.S. Library of Congress.</b> 400 Terabytes: National Climactic Data Center (NOAA) database.
<b>Petabyte (PB)</b>	1,000,000,000,000,000 bytes OR $10^{15}$ bytes 1 Petabyte: 3 years of EOS data (2001). <b>2 Petabytes: All U.S. academic research libraries.</b> 20 Petabytes: Production of hard-disk drives in 1995. 200 Petabytes: All printed material.
<b>Exabyte (EB)</b>	1,000,000,000,000,000,000 bytes OR $10^{18}$ bytes <b>2 Exabytes: Total volume of information generated in 1999.</b> 5 Exabytes: All words ever spoken by human beings.

Source: Many of these examples were taken from Roy Williams' *Data Powers of Ten?* web page at Caltech.

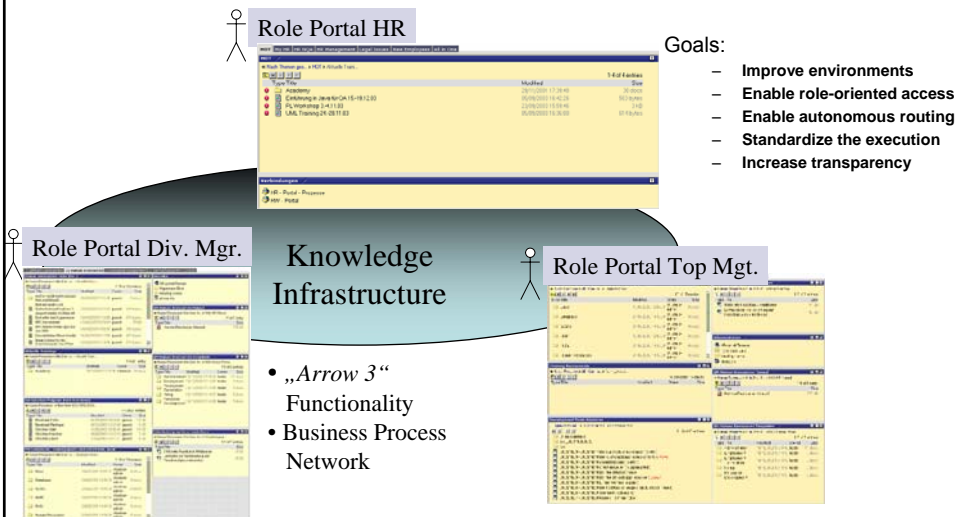
## Knowledge Management [Maier 2002] Related Research Domains



Markus Stro

FIGURE B-11. Technological roots and influences of knowledge management systems

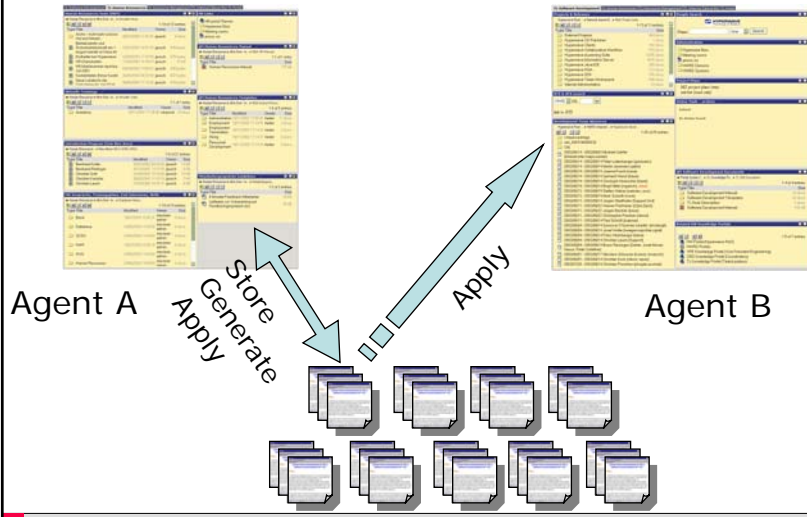
## Knowledge Portals



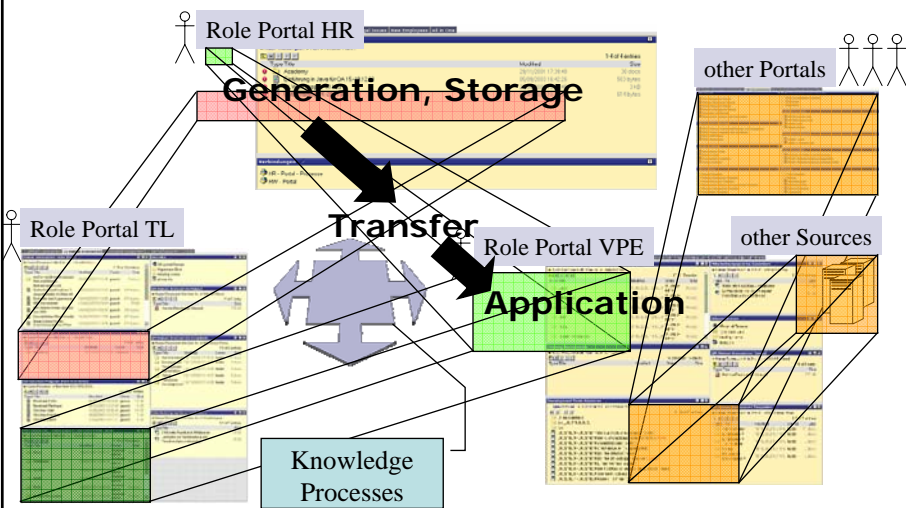
Markus Strohmaier

2007

# Knowledge Portals



# Designing Knowledge Infrastructures



# Corporate Weblogs as a KM instrument

Get the new version 2.3

---

HOME ABOUT EXTEND DOCS BLOG FORUMS HOSTING DOWNLOAD

---

SEPTEMBER 25, 2007

**WORDPRESS 2.3**

By Matt. Filed under [Development](#), [Releases](#).

I'm thrilled to announce that Version 2.3 "Dexter" of WordPress is **now ready for the world**. This release includes native tagging support, plugin update notification, URL handling improvements, and much more. This release is named for the great tenor saxophonist **Dexter Gordon**.

The entire team is really proud of this release, and I'm happy that this is our second on-time release under our **new development schedule**. The grand experiment of a more agile WordPress with significant features in the hands of users more often is working. I could write a blog post about each new feature, but I'll try to be brief:

- Native tagging support** allows you to use tags in addition to categories on your posts, if you so choose. We've included importers for the Ultimate Tag Warrior, Jerome's Keywords, Simple Tags, and Bunny's Technorati Tag plugins so if you've already been using a tagging plugin you can bring your data into the new system. The tagging system is also wicked-fast, so your host won't mind.
- Our **new update notification** lets you know when there is a new release of WordPress or when any of the plugins you use has an update available. It works by sending your blog URL, plugins, and version information to our new `api.wordpress.org` service which then compares it to the plugin

For more WordPress news, check out the WordPress Planet.

---

Markus Strohm
27

# Corporate Wikis as a KM instrument

Your continued donations keep Wikipedia running!

---

article discussion edit this page history
Sign in / create account

---

**Sputnik 1**

From Wikipedia, the free encyclopedia

**Sputnik 1** (Russian: "Спутник-1", "Satellite-1", or literally "Co-traveler-1" by name **ПС-1** (PS-1, i.e. "Посредный Спутник-1", or *Elementary Satellite-1*)) was the first artificial satellite to be put into geocentric orbit. Launched by the Soviet Union on October 4, 1957, it was the first satellite of the Sputnik program.

The satellite helped to identify the density of high atmospheric layers by its orbit change and provided data on radio-signal distribution in the ionosphere. Because the satellite's body was filled with pressurized nitrogen, Sputnik 1 also provided the first opportunity for meteorite detection, as *lozenges* in internal pressure due to meteoroid penetration of the outer surface would have been evident in the temperature data. The unanticipated announcement of Sputnik 1's success precipitated the Sputnik crisis in the United States and ignited the so-called Space Race within the Cold War.

Sputnik-1 was set in motion during the International Geophysical Year from the 5th Tyuratam range in Kazakh SSR (now Baikonur Cosmodrome). The satellite travelled at 29,000 kilometers (18,000 mi) per hour and emitted radio signals at around 20,005 and 40,002 MHz<sup>[1]</sup> which were *monitored* by Amateur radio operators throughout the world. The signals continued for 22 days until the transmitter batteries ran out on October 26, 1957.<sup>[2]</sup> Sputnik 1 burned as it fell from orbit upon reentering Earth's atmosphere, after traveling about 60 million km (37 million miles) in orbit.

**Contents** [hide]

- Prior to launch
- Design
- Mission
- Feedback
- Controversy surrounding re-entry
- Pop Culture
- Trivia
- Replicas
- Notes
- See also

**Sputnik 1**

"Спутник-1"

Organization:	Council of Ministers of the USSR
Major contractor:	OKB-1, Soviet Ministry of Radiotechnical Industry
Mission type:	Atmospheric studies
Satellite of:	Earth
Launch date:	October 4, 1957, 18:28:34 UTC (27:28:34 MSK)
Launch vehicle:	B-7
Decay:	January 4, 1958
Mission duration:	3 months
ISSDC ID:	1957-041B <span>ⓘ</span>
Webpage:	NASA ISSDC Master Catalog <span>ⓘ</span>
Mass:	83.6 kg (183.3 lb.)
Semimajor axis:	6,955.2 km (4,321.8 miles)
Eccentricity:	.0291
Inclination:	65.1°
Orbital period:	96.2 minutes
Apoapsis:	329 km (203 miles)
Periapsis:	215 km (134 miles)
Orbit:	1,430

---


Markus Strohm
28


## KM failures

- Under which conditions can such instruments fail?
- Do you know of failed projects where blogs/wikis/portals/etc did not achieve the desired effect?
- What was the cause to that?

## KM failures

- Lack of motivation
- Lack of ability
- Low/wrong quality of communication channel
- Lack of awareness
- Lack of management support
- Lack of purpose
- ...

Knowledge Management Institute			
Preliminary Schedule I			
Week	Date	Title, Slides	Comments and Links
Week 1 slides	4.10.2007	<b>Overview and Motivation</b> (slides)	In this class, we will discuss the course organization and give a basic motivation for and introduction to the course.  <b>Readings:</b> F.F. Drucker, Knowledge-Worker Productivity: The Biggest Challenge, California Management Review 41 79--94 (1999) [ <a href="#">Protected Access</a> ]
Week 2 slides	11.10.2007	<b>Knowledge Types and Processes</b> (slides)	What is knowledge? What forms of knowledge can we identify? We will discuss some basic distinctions and characterizations.  <b>Readings:</b> D. Kirsh, When is information explicitly represented?, Information, Language and Cognition - The Vancouver Studies in Cognitive Science. 340--365, 1990. [ <a href="#">Protected Access</a> ]
Week 3 slides	18.10.2007	<b>Knowledge Management Strategies</b> (slides)	A series of different "schools of knowledge management" have been proposed by KM researchers: We will discuss selected perspectives and some implications for knowledge management.  <b>Readings:</b> M.T. Hansen and N. Nohria and T. Tierney, What's your Strategy for Managing Knowledge?, Harvard Business Review, 1999. [ <a href="#">Protected Access</a> ] M. Earl, Knowledge Management Strategies: Toward a Taxonomy, Journal of Management Information Systems 18 215--233, 2001. [ <a href="#">Protected Access</a> ]
Week 4 slides	25.10.2007	<b>Knowledge Organization</b> (slides)	How can knowledge be organized? We will discuss some basic principles of knowledge organization.  <b>Readings:</b> C.B. Mervis and E. Rosch, Categorization of Natural Objects, Annual Review of Psychology 32 89--115, 1981 [ <a href="#">Protected Access</a> ]
Week 5 slides	8.11.2007	<b>Broad Knowledge Bases</b> (slides)	What kind of broad knowledge bases exist? We will discuss different forms of knowledge bases and representations, such as metadata, wordnet, framenet, cyc, openmind and others.  <b>Readings:</b> T. Berners-Lee and J. Hendler and O. Lassila, <i>The semantic Web</i> , Scientific American, 284 (5) 2001.
Week 6 slides	15.11.2007	<b>Knowledge Acquisition</b> (slides)	How can knowledge be acquired in a way that is amenable to computation and/or analysis?  <b>Readings:</b> L. von Ahn, <i>Games with a Purpose</i> , Computer, 39(6): 92--94, 2006.
Week 7 slides	22.11.2007	<b>Knowledge Transfer</b> (slides)	How can knowledge transfer be characterized and what factors can influence knowledge transfer? We will discuss these and further issues.  <b>Readings:</b> M. E. Nissen and R. E. Levitt, <i>Agent-Based Modeling of Knowledge Flows: Illustration from the Domain of Information Systems Design</i> , Proceedings of the 37th Hawaii International Conference on System Sciences, 2004. A. Cabrera and E.F. Cabrera, <i>Knowledge-sharing dilemmas</i> , Organization Studies 23 687-710 (2002)

Knowledge Management Institute			
Preliminary Schedule I			
Week 8 slides	29.11.2007	<b>Organizational Knowledge Repositories</b> (slides)	How can knowledge repositories be designed and deployed? We will discuss concepts such as knowledge reuse, discretionary databases, experience factories and selected concepts from case based reasoning.  <b>Readings:</b> V. R. Basili and G. Caldiera and D.H. Rombach, <i>Experience Factory</i> , Encyclopedia of Software Engineering 469-476 (1994)
Week 9 slides	6.12.2007	<b>Psychology in Knowledge Management</b> (slides)	In this class, we will discuss some fundamental psychological concepts in the context of knowledge management, including for example Knowledge Space Theory.  <b>Guest Lecture:</b> T. Ley, Know-Center  <b>Readings:</b> TBA
Week 10 slides	13.12.2007	<b>Multimedia &amp; Semantic Metadata</b> (slides)	In this class, we will discuss different forms of semantic annotation of multimedia documents.  <b>Guest Lecture:</b> M. Lux, Klagenfurt University  <b>Readings:</b> TBA
Week 11 slides	10.1.2008	<b>Business Process Oriented Knowledge Management</b> (slides)	In this class, we will discuss different approaches aimed at integrating knowledge management into an organization's business processes.  <b>Readings:</b> TBA
Week 12 slides	17.1.2008	<b>Agent- and Goal-Oriented Analysis of Information Systems</b> (slides)	What are the requirements for effective information systems? In this class, we will discuss an agent-oriented framework for early requirements engineering  <b>Readings:</b> TBA
Week 13 slides	24.1.2008	<b>Knowledge-based Analysis</b> (slides)	How can socio-technological systems be organized from a knowledge perspective? We will discuss an agent-oriented modeling approach for analyzing knowledge transfer instruments.  <b>Readings:</b> M. Strohmaier, E. Yu, J. Horkoff, J. Aranda and S. Easterbrook, <i>Analyzing Knowledge Transfer Effectiveness - An Agent-Oriented Approach</i> , In Proceedings of the 40th Hawaii International Conference on System Sciences (HICSS-40 2007), January 3-9, IEEE Computer Society, Hawaii, USA, 2007.
Week 14 slides	31.1.2008	<b>Final Exam</b>	No aids are allowed at the final exam.

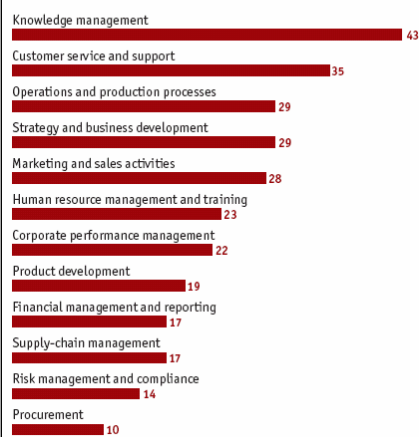
## Why Knowledge Management?

- Knowledge-based theory of the firm
- Knowledge based economy
- The digital age
- Rising levels of education
- Drastic increase of human knowledge
- Different forms of knowledge
- Increasing dependency on knowledge

## What do enterprises think?

- Survey of CEOs
- Why do you think is KM regarded to be so crucial?

Which of the following areas of activity offer the greatest potential for productivity gains over the next 15 years? Select up to three activities. (% respondents)



Source: Economist Intelligence Unit survey, 2005.

## Motivation

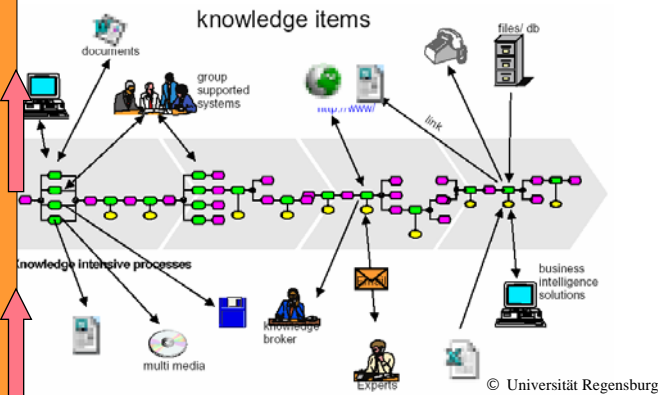
Organizational work becomes increasingly knowledge intensive and complex. [Eppler 1999]

### Knowledge Intensity:

Learning time  
Half life  
Decision scope  
Agent impact

### Complexity:

Process steps  
Involved agents  
Interdependency  
Process dynamic



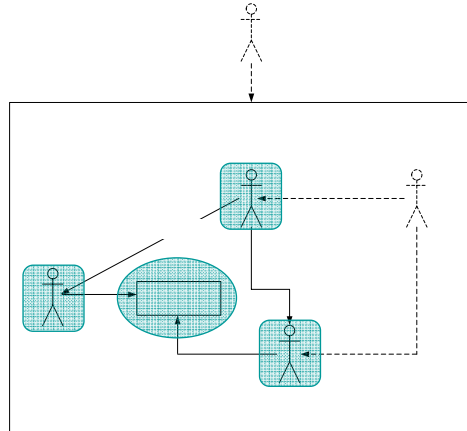
© Universität Regensburg

## Factors determining Knowledge Work [Drucker 1999]

- Knowledge about the task
- Autonomy
- Continuing innovation
- Continuous learning and teaching
- *Quality at least as important as quantity*
- Motivation
  - It requires that knowledge workers want to work for the organization

# Roles in Knowledge Management

Based on [Schreiber et al. 02]



Knowledge  
Manager

## KI Development Project

Knowledge Management Institute

University of Toronto
Department of Computer Science

## What will you accept as knowledge?

<p><b>→ Positivist (or "Post-positivist")</b></p> <ul style="list-style-type: none"> <li>☞ Knowledge is objective</li> <li>☞ "Causes determine effects/outcomes"</li> <li>☞ Reductionist: study complex things by breaking down into simpler ones</li> <li>☞ Prefer quantitative approaches</li> <li>☞ <b>Verifying (or Falsifying) theories</b></li> </ul>	<p><b>→ Constructivist/Interpretivist</b></p> <ul style="list-style-type: none"> <li>☞ Knowledge is socially constructed</li> <li>☞ Truth is relative to context</li> <li>☞ Theoretical terms are open to interpretation</li> <li>☞ Prefer qualitative approaches</li> <li>☞ <b>Generating Theories</b></li> </ul>
<p><b>→ Critical Theorist</b></p> <ul style="list-style-type: none"> <li>☞ Research is a political act</li> <li>☞ Knowledge is created to empower groups/individuals</li> <li>☞ Choose what to research based on who it will help</li> <li>☞ Prefer participatory approaches</li> <li>☞ <b>Seeking change in society</b></li> </ul>	<p><b>→ Eclectic Pragmatist</b></p> <ul style="list-style-type: none"> <li>☞ Research is problem-centered</li> <li>☞ "All forms of inquiry are biased"</li> <li>☞ Truth is what works at the time</li> <li>☞ Prefer multiple methods / multiple perspectives</li> <li>☞ <b>seeking practical solutions to problems</b></li> </ul>

© 2004-5 Steve Easterbrook. This presentation is available free for non-commercial use with attribution under a creative commons license. 16

analyzes

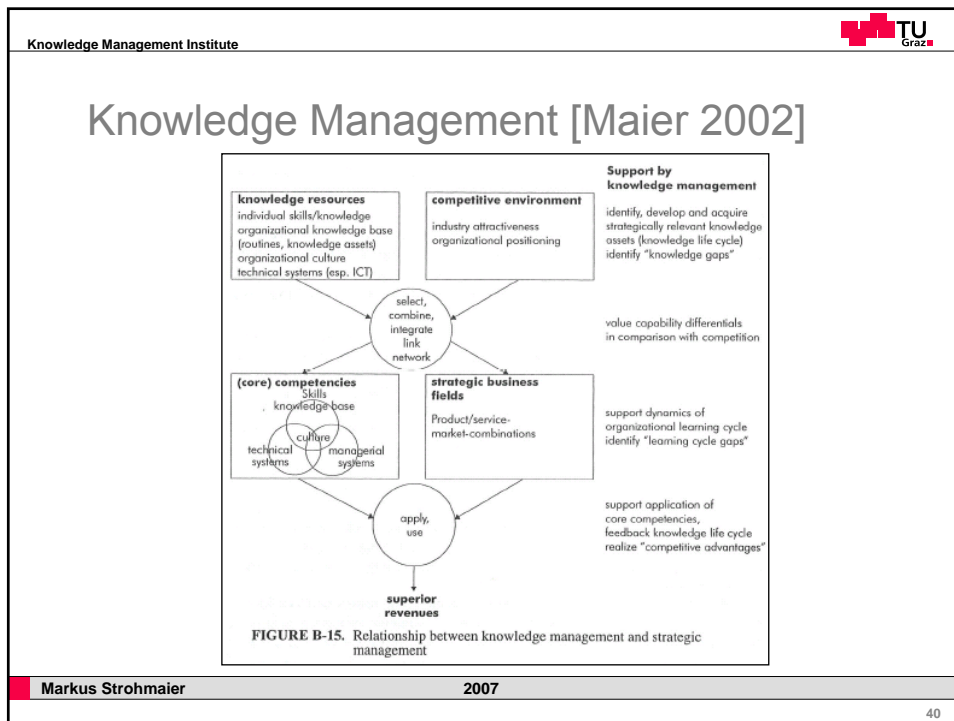
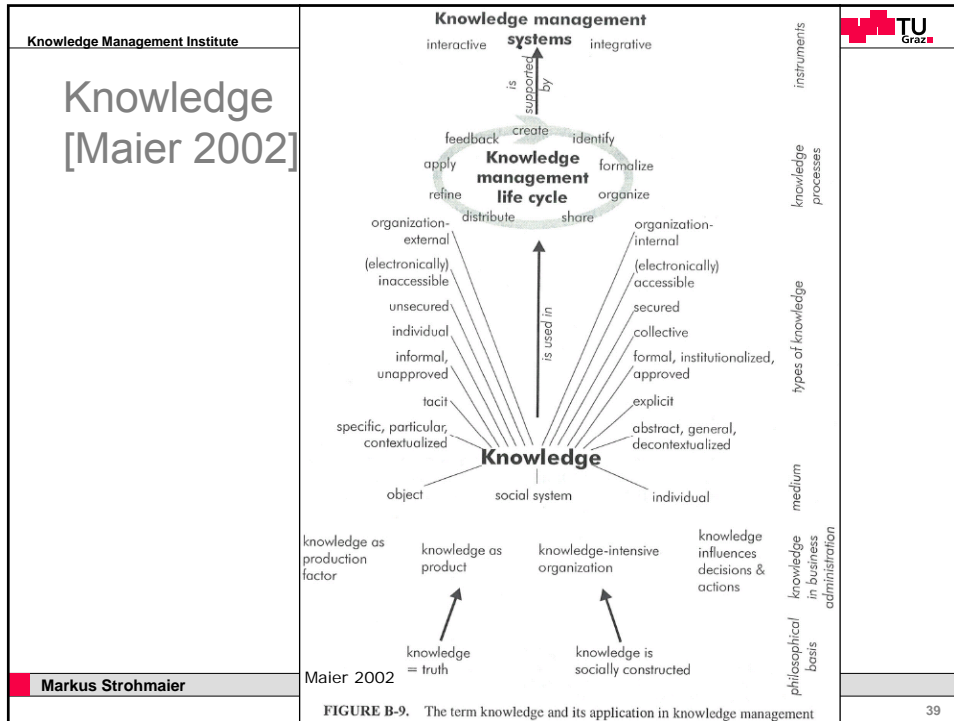
Knowledge Infrastructure

uses & validates

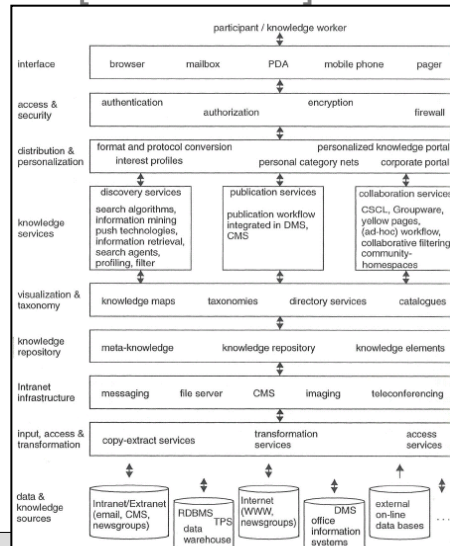
edge ter

designs

Knowled



# Knowledge Management Architecture [Maier 2002]



Markus Strohmaier

FIGURE B-22. Typical architecture for knowledge management systems

# Knowledge Management Systems Success [Maier 2002]

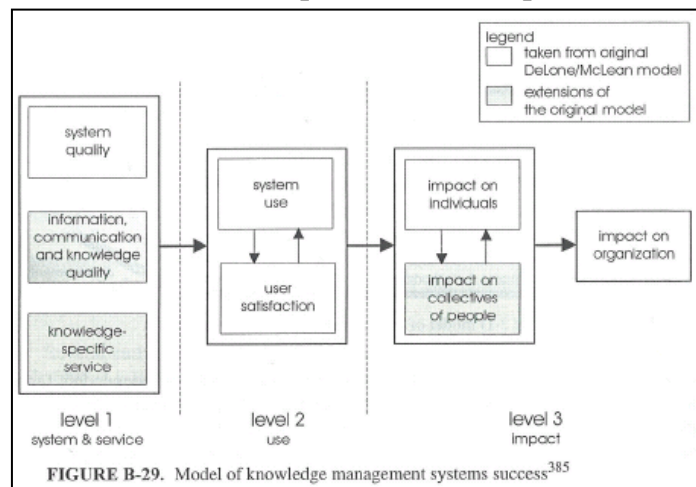


FIGURE B-29. Model of knowledge management systems success<sup>385</sup>

Markus Strohmaier

2007

# Knowledge

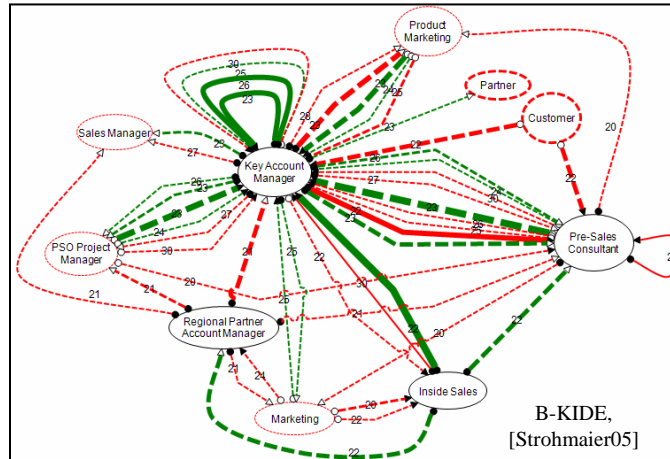


## Explicit and Implicit Knowledge

## Some Course Highlights Explicit or Implicit? [Kirsh 1990]

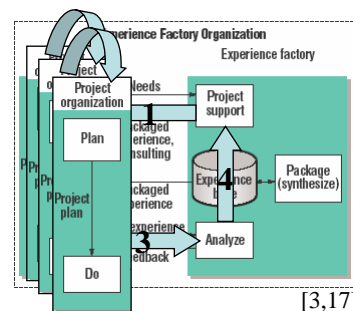
1. Is 5 as the solution to  $\sqrt[3]{125}$  explicit in  $\sqrt[3]{125}$  ?
2. Is the  $200^{100^{100}}$  digit of  $\pi$  explicit?
3. Is 3 explicit in  $A: \{1,5,3,7,4,4\}$ ?
4. Is the cardinality of  $A$  explicit in  $A: \{1,5,3,7,4,4\}$ ?
5. Is (6754, 9629) in a matrix of 10,000 x 10,000 explicit?
6. Is the answer to „Why does the pop star *P!nk* perform 4 Non Blondes songs at her concert“ explicit on the web?

## Some Course Highlights



## Some Course Highlights

- **Experience Factories (EF)** focus on the facilitation of Knowledge Transfer between Software Developers
- Experience Base
  - "Packages Experiences"
- Goals
  - Knowledge Transfer
  - Knowledge Reuse



Knowledge Management Institute

## Some Course Highlights

Under which conditions can the Experience Factory concept fail?

The diagram illustrates the Experience Factory concept, centered around a dashed circle labeled "Experience Factory". It shows dependencies on "Project characteristics" and "Lessons Learned, Data". The process involves "Experience packages" and "Experience Base". Key activities include "Facilitate Inter-Project Experience Transfer", "Provide project support", "Analyze projects", "Package experience packages", "Experience Base", "Provide project support", "Transfer experiences", "Execute project", "Develop Software", "Develop and maintain software efficiently", "Experience consumer", "Experience provider", "Experience factory", "Plan project", "Select adequate experience package", "Provide project characteristics", and "Provide experiences". A stick figure with a question mark is shown next to the text "Under which conditions can the Experience Factory concept fail?".

Markus Strohmaier 2007

47

Knowledge Management Institute

TU Graz

## Some Course Highlights

The ConceptNet graph shows relationships between coffee-related concepts. Nodes include: bed, person, wake up, get out of bed, drink coffee, feel awake, feel jittery, open eyes, make coffee, pour coffee, pick up cup, coffee, cafe, sugar, cup, wet, and drink. Relationships include: located at, last subevent, after, causes, subevent, is for, located in, often near, property of, and does not want.

Common Sense Knowledge  
ConceptNet, MIT, 2007

Markus Strohmaier 2007

48

## Some Course Highlights



## Check

- Is there anything else you want to know w.r.t. this course?
- What aspects are you most interested in?
- Anything else?

Any further questions?

**Have a good start in the new semester!**  
**- See you next week**