

Forschungszentrum Telekommunikation Wien  
[Telecommunications Research Center Vienna]

Information Management 2005

Alles Online ?!  
Everything Online !?

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ISN Oldenburg, September 2002

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- Documents
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## Hardware

- Server
- Handy
  
- ebook
- print



# Information Management

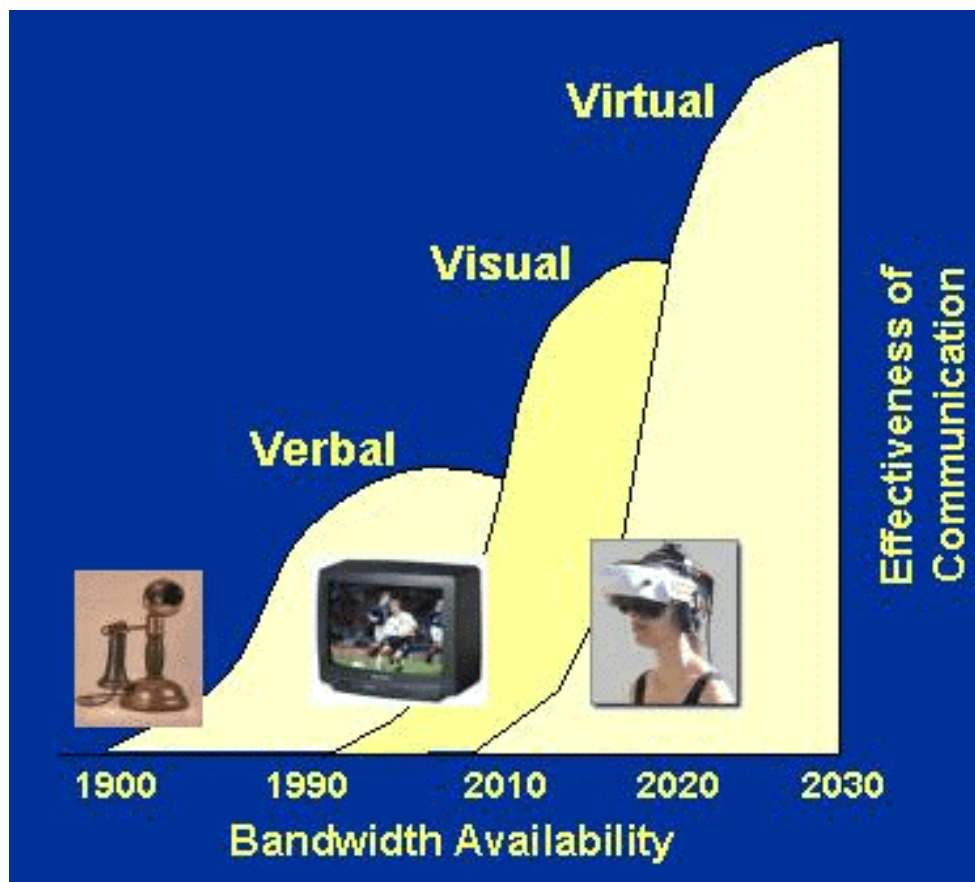


Die richtige Information  
zum richtigen Zeitpunkt  
in der richtigen Menge  
am richtigen Ort  
in der erforderlichen Qualität  
zur Verfügung stellen.

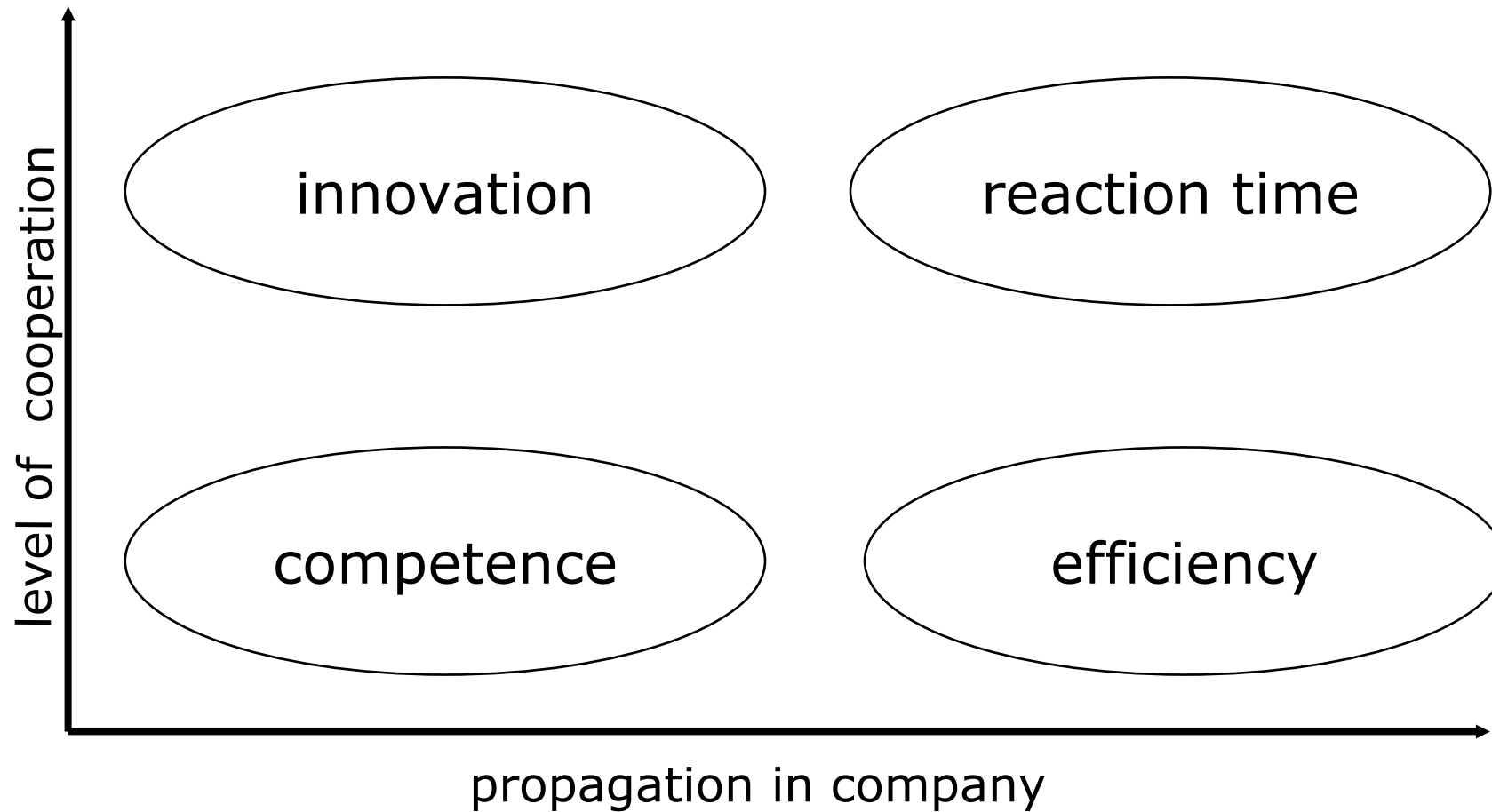
Augustin '90

To discover the unexpected,  
verify the expected and  
make it available for re-use.

Thomas '01

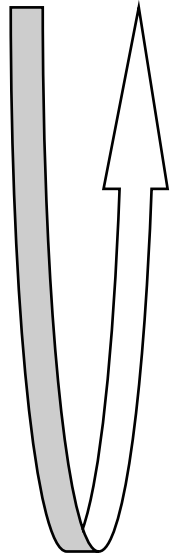


© Roger Camrass and Martin Farncombe, 2000/2001



# Definitions

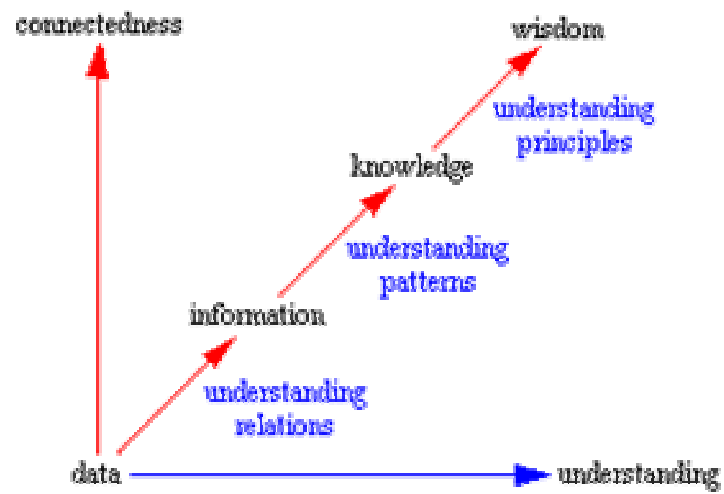
- Signs (01001010)
- Data  
pure material
- Information  
data with context
- Knowledge  
interpretation of information
- Wisdom  
networked knowledge



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[2]

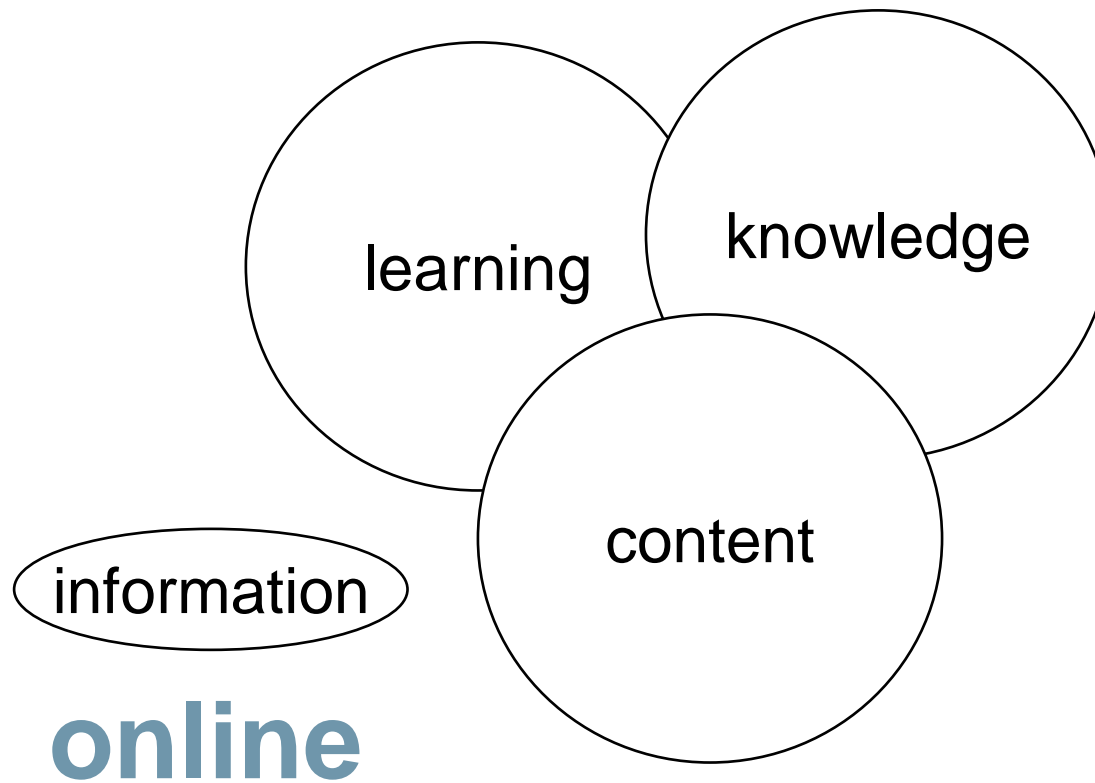
# Data, Information, Knowledge, and Wisdom



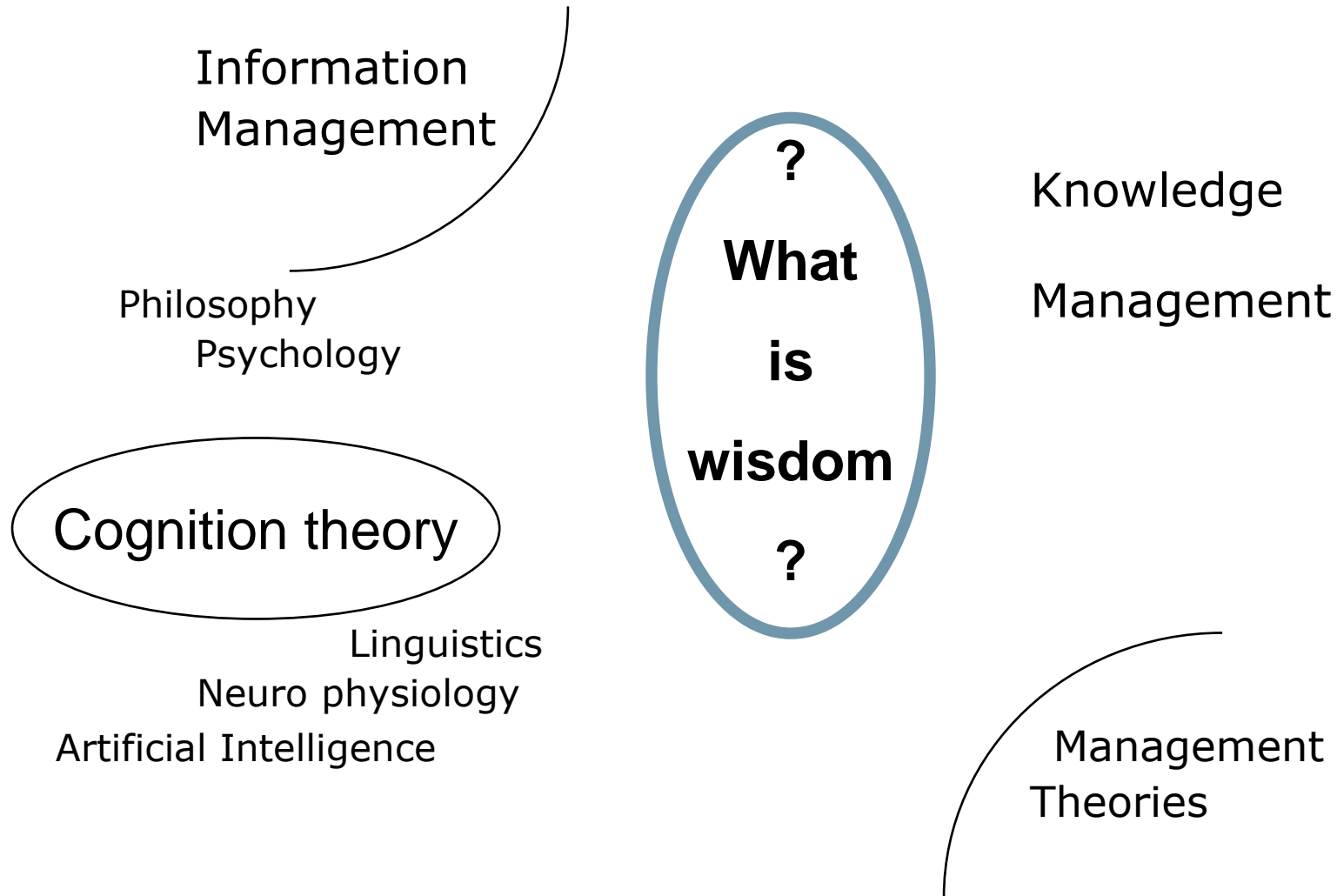
© Gene Bellinger 2002



# Connections between



# Related subjects



# Knowledge Management



Human activity that is part of the KMP

Puts - people first

[8]

- organizational issues second

- technology third

Really added value needs

- open enterprise culture

- Fearless communication channels

- Adequate IT-infrastructure

# Online Research



- Distressing disclosure:  
intending to harm people
- Legally accountable ?
- Ethically responsible ?

[11]

# (Search-) Maschines



- Avatar / Social Butler with user profile
- Intelligent:
  - self-explanatory to the user
- Intelligible:
  - user can guess of intended use



# Online Archives



- CiteSeer  
Computer Sciences <http://researchindex.org/>  
500.000 docs
  - IEEE Xplore  
Engineering <http://ieeexplore.ieee.org/>  
762.000 docs
  - MPRESS  
Mathematics <http://mathnet.preprints.org/>  
51.000 docs
  - arXiv.org <http://www.arxiv.org/>  
Physics, Mathematics,  
Nonlinear Sciences  
and Computer Science 194.000 docs
- date 4/2002

# Information Resources 2002



- Leading **TV**,  
increasing: 73% (1999: 67%)
- Middle range **Internet**,  
soaring: 29% (1999: 9%)
- Taillight **Library**,  
decreasing: 15% (1999: 17%)

Allensbacher Markt- und Werbeträgeranalyse (AWA) 2002

# Facts



## Retrieval

- 80% precision with low recall  
v 80% recall with low precision

## Summarization

- Compress 50%

## Data

- 2000 1.000 mill pages on 4 mill servers
- 100 mill queries / day
- 6% relevant for science & education
- 1,5% pornography

## E-Science

- PentaBytes of info / year
- 1 mill pubs /year



## Translation

- 2000 English ~ 50% material on the web
- 2007 Chinese primary language [8]

## IR / IM are school subjects

## Retrieve information concerning to

- knowledge level (public – student – academic)
- ‚layout‘ (graphic – text – formular)

# Brave new world ?!



- Wisdom vs hudge amout of data
- Copyright vs Urheberrecht
- Student`s life vs vitual university
- Learning vs entertainment
- Effort / stress vs Spaßgesellschaft

# References



1. Bontis, N., **Assessing knowledge assets: a review of the models used to measure intellectual capital**  
IJMR, Vol. 3, Issue 1, pp.41-69, March 2001
2. Firestone, Joseph M. **Key Issues In Knowledge Management**  
Knowledge and Innovation: Journal of the KMCI, Vol. 1., No. 3 2001, pp. 8-38
3. Fürnkranz, J. **Hypertext Classifikation: A Case Study in Hypertext Classification**  
Technical Report OEFAI-TR-2001-30
4. Koopmanns, N.I.: **What's your question? The need for research information from the perspectives of different user groups**  
Proc. CRIS2002, Kassel August 2002, pp.183-192
5. Kleinberg, J., Lawrence, S.: **The Structure of the Web**  
Science, Vol. 294, p. 1849, 30 November 2001
6. Lawrence, S.: **Online or invisible?**  
Nature Vol. 411, Nr. 6837, p.521, 2001
7. Lugger, K.-M., Kraus, H.: **Mastering the Human Barriers in Knowledge**  
Proc. I-KNOW'01, J.UCS 1, 2001
8. Staab, Steffen: **Trends & Controversies**  
IEEE Intelligent Systems, Nov./Dec. 2001, pp.84-94
9. Stein, S. **Including the Technical Personnel: An Alternative IP Model in the Development of Distributed Learning Courses**  
IEEE Proc. of ISTAS'02 Raleigh, June 2002, pp. 53-56
10. Stein, S. **The Media Production Model: An Alternative Approach to Intellectual Property Rights in Distributed Education**  
EDUCAUSE Review 36 (1), January/ February 2001 pp. 26-37
11. Stern, S.R.: **Encountering Distressing Information in Online Research: A Consideration of Legal and Ethical Responsibilities**  
Talk at ISTAS'02 IEEE Raleigh, June 2002
12. Zhao, J. L., Resh, V. H.: **Internet Publishing and Transformation of Knowledge Processes** Communication of the ACM Vol. 44, No. 12, December 2001
13. Zimmermann, K.: **A Research Information Portal for Telecommunications**  
Proc. ISTAS'02 IEEE Raleigh, June 2002, pp. 143-149

# Question, Comments ?



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