



# Meta-Klassifikation und Kategorien für interdisziplinäre Forschung

*Kerstin Zimmermann*

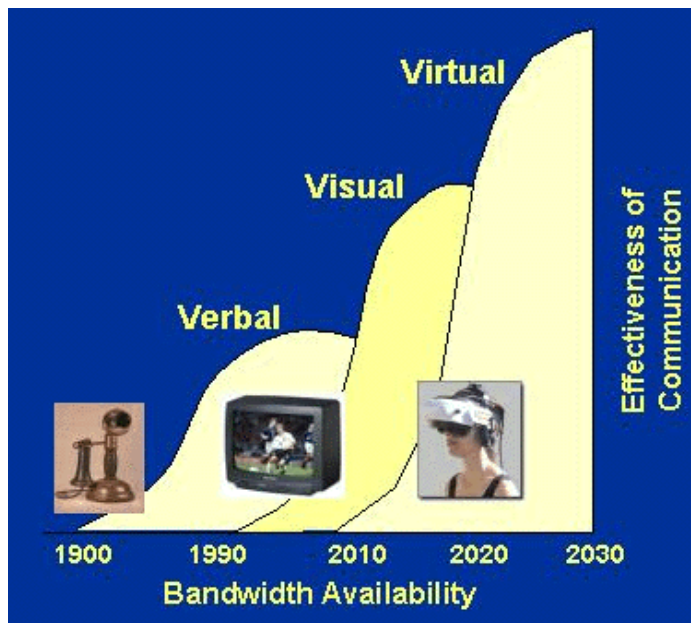
Jahrestagung GfKI, Cottbus März 2003

**K<sub>plus</sub>**  
Kompetenzzentren-Programm

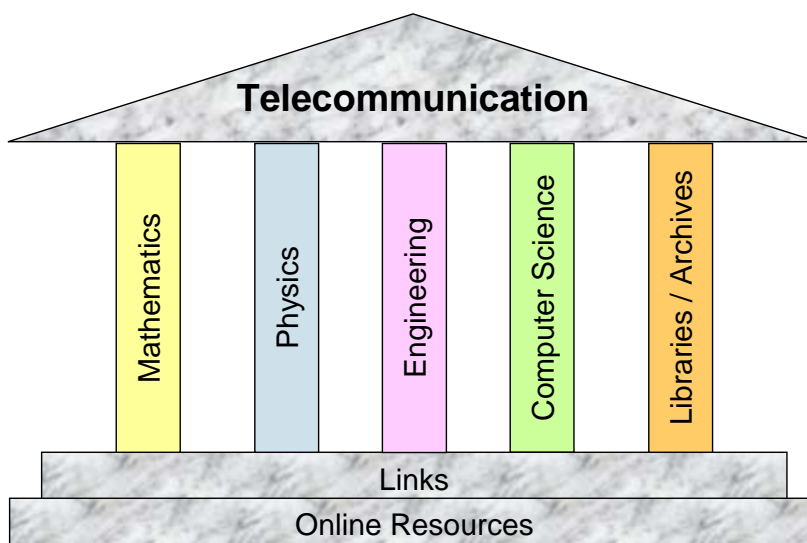
## Inhalt



- Telekommunikation
- Informationsbedarf
- Kategorien / Klassifikationen
- Portale



© Roger Camrass and Martin Farncombe, 2000/2001



- Kontakte

Researcher  
(email) Adressen  
Arbeitsgruppen  
Universitäten

- Termine

Konferenzen  
Deadlines

- Dokumente

Publikationen  
Standards  
Lernmaterialien

## Welche Informationsquellen ?



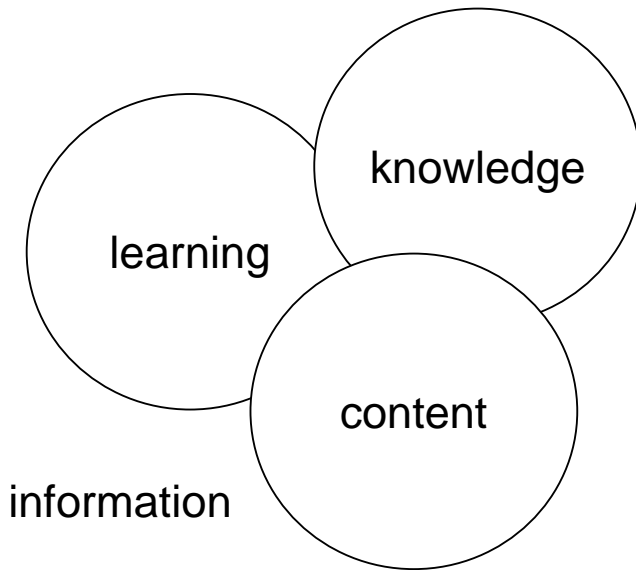
- Bücher
- Journale
- Paper
- Preprints
- Conference Proceedings

g  
e  
d  
r  
u  
c  
k  
t  
  
C  
D

} Dokumente

- Webseiten
- Homepages

} Adressen



communication  
community  
-> Fachsprache

# Bibliografische und technische

DDC (America) Dewey Decimal Classification	UDK (Europe) Internationale Universale Dezimalkl.
003.5 theory of communication and control 003.54 information theory	
004 Data processing Computer science	004 Computer Science
500 Natural sciences & mathematics Science	500 Mathematical and Natural
510 Mathematics	510 Mathematics
530 Physics	530 Physics
600 Technology (Applied sciences) Technology	600 Applied Sciences. Medicine.
620 Engineering / allied operations	620 Engineering, Technology in general
621 Applied physics	621.3 Electrical engineering 621.38 Electronics
	654 <b>Telecommunications</b>

ACM Computing Classification Scheme
B.4 Input / Output and Data Communications
C.2 Computer-Communication Networks C.2.1 Network Architecture and Design
C.4 Performance of Systems
D.4 Operating Systems D.4.4 Communications Management D.4.6 Security and Protection
E.4 Coding and Information Theory
H.3 Information Storage and Retrieval
J.2 Physical Sciences and Engineering

IPC International Patent Classification
H 03 Basic electronic Circuitry
H 03 B Generation of Oscillations, Directly or by Frequency-Changing, by Circuits Employing Active Elements which operate in a non-switching Manner; Generation of Noise by such Circuits
H 03 C Modulation
H 03 D Demodulation or Transference of Modulation from one Carrier to another
H 03 F Amplifiers
H 03 G Control of Amplification
H 03 H Impedance Networks, e.g. Resonant Circuits; Resonators
H 03 J Tunnin Resonant Circuits; Selecting Resonant Circuits
H 03 K Pulse Technique
H 03 L Automatic Control, Starting, Synchronisation, or Stabilesation of Generators of Electronic Oscillations or Pulses
H 03 M Coding, Decoding or Code Conversion, in general
H 04 Electric Communication Technique
H 04 B Transmission
H 04 H Broadcast Communication
H 04 J Multiplex Communication
H 04 K Secret Communication; Jamming of Communication
H 04 L Tranmission of Digital Information
H 04 M Telephonic Communication
H 04 N Pictorial Communication
H 04 Q Selecting

MSC	Mathematical Subject Classification
94-XX	Information and communication, circuits
94Axx	Communication, information
94A05	Communication theory
94A08	Image processing (compression, reconstruction, etc.)
94A11	Application of orthogonal functions in communication
94A12	Signal theory (characterization, reconstruction, etc.)
94A13	Detection theory
94A14	Modulation and demodulation
94A15	Information theory, general
94A17	Measures of information, entropy
94A20	Sampling theory
94A24	Coding theorems (Shannon theory)
94A29	Source coding
94A34	Rate-distortion theory
94A40	Channel models
94A45	Prefix, length-variable, comma-free codes
94A50	Theory of questionnaires
94A55	Shift register sequences and sequences over finite alphabets
94A60	Cryptography
94A62	Authentication and secret sharing
94A99	None of the above, but in this section
94Bxx	Theory of error-correcting codes and error-detecting codes
94B05	Linear codes, general
94B10	Convolutional codes
94B12	Combined modulation schemes (including trellis codes)
94B15	Cyclic codes
94B20	Burst-correcting codes
94B25	Combinatorial codes
94B30	Majority codes
94B35	Decoding
94B40	Arithmetic codes
94B50	Synchronization error-correcting codes
94B60	Other types of codes
94B65	Bounds on codes
94B70	Error probability
94B75	Applications of the theory of convex sets and geometry of numbers (covering radius, etc.)
94B99	None of the above, but in this section
94Cxx	Circuits, networks
94C05	Analytic circuit theory
94C10	Switching theory, application of Boolean algebra; Boolean functions
94C12	Fault detection; testing
94C15	Applications of graph theory
94C30	Applications of design theory
94C99	None of the above, but in this section

## PACS Physics and Astronomy Classifications Scheme

- 01.20.+x Communication forms and techniques (written, oral, electronic, etc.)
- 02.05.-r Probability theory, stochastic processes, and statistics
- 84.40.Az Waveguides, transmission lines, striplines
- 84.40.Ba Antennas: theory, components and accessories
- 84.40.Ua **Telecommunications**: signal transmission and processing; communication satellites
- 84.40.Xb Telemetry: remote control, remote sensing; radar
- 89.70.+c Information Science

## RVK

- AP 18450 **Telekommunikation**, Bildschirmtext
- AP 38000 – AP 38580 Hörfunk- und Fernsehtechnik
- GZ 980 – GZ 988 **Telekommunikation**, Neue Medien
- PN 682 – PN 690 Post- und Fernmelderecht, Telekommunikationsrecht
- PS 3620 Forschung / Recht, Technologie, Telekommunikationsrecht
- OH 460 Nachrichtenvermittlungsmodelle Telekommunikationsnetz || Vermittlungstechnik / Modell
- OP 345 Informationswesen. Informationssysteme
- ZN 6000 – ZN 6570 Nachrichtentechnik; **Telekommunikation**

- RVK  
SA-SP Mathematik  
SK 110-990 Monografien  
**34** Unterklassen  
-> **58**  
    Unterunterklassen

SM Didaktik der  
Mathematik,  
Schulbücher

- MSC  
00-xx ... 990-xx

**65** Klassen  
-> **985** Unterklassen

- RVK  
U Physik  
  
UF Mechanik  
UG Thermodynamik  
UM Atom- und  
Molekülphysik  
UN Kernphysik  
  
US Astronomie, Astrophysik  
UT Geophysik, Meteorologie  
...  
**21** Klassen  
-> **361** Unterklassen

- PACS Category  
00 – 90  
  
30 Atomic and Molecular  
Physics  
20 Nuclear Physics  
  
90 Geophysics, Astronomy,  
and Astrophysics  
  
**10** Klassen  
-> **66** Unterklassen



- **01 Communications**  
  - [01.01](#) xDSL, cable powerline   [01.02](#) Wireless   [01.03](#) Multiuser   [01.04](#) Optical
- **02 Networks**  
  - [02.01](#) ATM   [02.02](#) Multimedia   [02.03](#) Quality of Service
  - [02.04](#) Web Technologies   [02.05](#) Signaling Protocols   [02.06](#) Traffic Analysis
  - [02.07](#) Network Performance   [02.08](#) Billing, Pricing   [02.09](#) TCP
- **03 Security**
- **04 Signal Processing**
- **05 Speech**
- **06 Coding and Information Theory**
- **07 Mathematics**  
  - [07.01](#) Fundamentals   [07.02](#) Graph Algorithms
- **08 Software**  
  - [08.01](#) Manual   [08.02](#) Operating Systems
  - [08.03](#) Algebraic and Numerical Programming / Simulation   [08.04](#) User Interfaces
  - [08.05](#) Object Oriented Design   [08.06](#) Programming Languages
- **09 Lexikon / Dictionary**
- **10 Info / Knowledge**
- **11 Physics**  
  - [11.01](#) Quantum Mechanics   [11.02](#) Solid State   [11.03](#) Statistical Mechanics
- **12 Hardware Design**

## Bibliotheken

- Kulturauftrag:  
Wissensobjekte sammeln, erschließen und bereithalten (archivieren)
- ohne Kriterium der aktuellen Nutzung
- Fachleute für andere

## Fach-Portal

- Zugang zu Informationen
- aktueller Gebrauch
- Selbstorganisation von Wissen durch die Wissenschaft

- Kompetenz
- Hintergrundinformation
- (Informations-) Veranstaltungen
- Projektergebnisse
- Lebensläufe



The screenshot shows a web page titled "Research Information Portal for Telecommunications". On the left side, there is a vertical menu with the following links: [home](#), [research institutes](#), [documents](#), [conferences](#), [definitions](#), [standards](#), [legal](#), [related](#), [search](#), and [provider](#). Below the menu, there is a copyright notice: "© Kevin Ziemann 2001 ftw. upload 5/2001 update 2/2003" and the text "Thanks to my colleagues". The main content area features the text "Welcome to an Academic Service" in a bold, serif font, with an [\[about\]](#) link below it. The background of the main content area is light blue with several faint, stylized "ftw." logos scattered across it.



**home**

**research institutes**



Departments and ongoing projects sorted by country

**documents**



Publications sorted by country  
white papers  
learning materials sorted by subject  
journals / online archives, other resources

**Standards**



Forums, Organizations, classifications

**definitions**



terminology

**conferences**



Relevant events sorted by topic and date

**provider**



list inter/national

**legal**



Authorities and acts sorted by country

**related**



Ministries and close by

**search**



all sites

**email**



Contact

**about**



background information about the project

# Probleme

## ▪ Lokalisierung

- Computer Science
- Communications systems
- Communications Engineering
- Electronic / Electrical Engineering
- Information technology
- Mathematics
- Signal Processing
- Telematics
- etc. ...

## ▪ Sprache

- dt. / engl.
- ital.
- franz.

**180 Inst.**

**in 32 Ländern**

## Vergleich der Rubriken

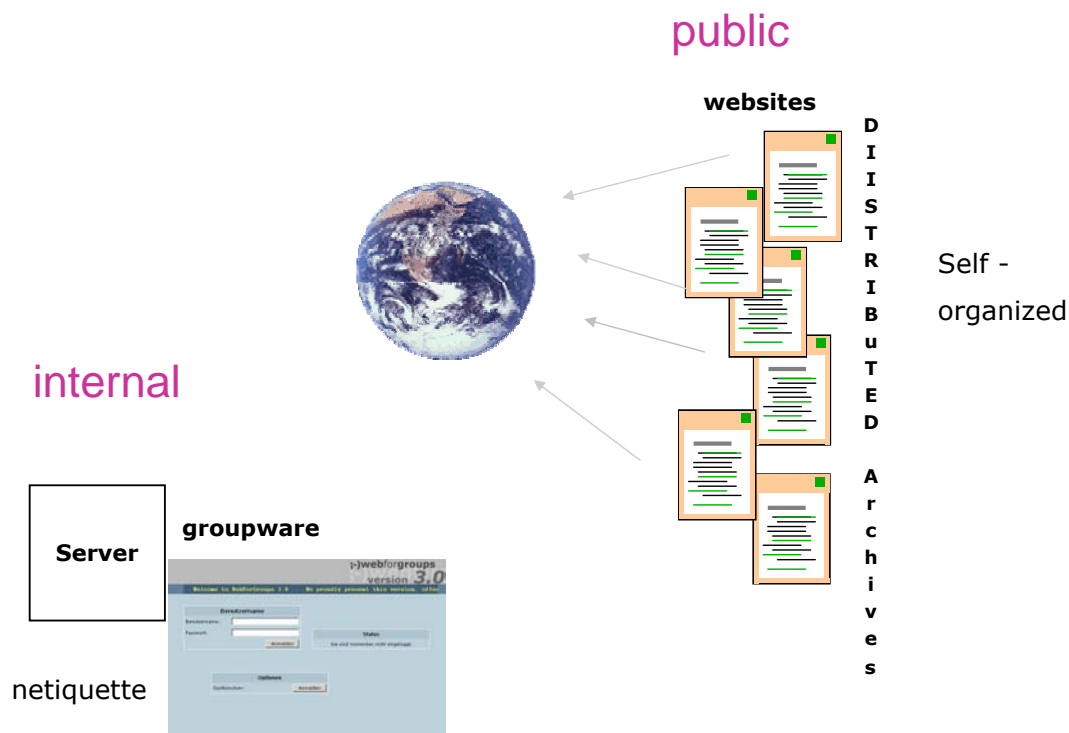
MareNet 2001 -	ISN / D	Telecom Portal start 2002	ftw. / A
MareNet		home	
		search	
MareInst	search	research institutes	
MareDoc	search	documents: publications white papers learning material journals online archives other resources	
MareJournals			
MareData		definitions	
		standards	
MareJobs		-	
MareConf		conferences	
MareLinks		related	
-		legal	
Author Tools		provider	
Upload Form		-	
about		about	
crew		name	
contribute		email	
statistics		-	
new		-	

# Was kann / soll ein Portal leisten?



- Zentraler fachspezifischer Einstiegspunkt
- Schnittstelle zwischen Intra- und Internet
- Definierter Suchraum
  - > eingeschränkt, aber vollständig
  - > „vorsortierte“, gefilterte Informationen
- Virtuelle Teams

# System local <-> worldwide



- Verteilte Arbeitslast
- Keine veralterten Datenbankeinträge
- AutorIn für Aktualität  
und Inhalt verantwortlich
- Wenig technische Absprachen notwendig

- [1] Fürnkranz, J.: *Hypertext Klassifikation: A Case Study in Hypertext Classification*, Technical Report OEFAI-TR-2001-30
- [2] Hilf, E., Hohlfeld, M., Severiens, T., Zimmermann, K.: *Distributed Information Services in Physics* High Energy Physics Libraries Webzine, issue 4, June 2001 <<http://library.cern.ch/HEPLW/4/papers/2>>
- [3] Hohlfeld, M., Wolff, J.-O.: *Distributed Information Services in Marine Science*, Oceanography Vol. 15(1), 2001, pp. 109-111 ISSN 1042-8275
- [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] Kuhlen, Rainer *Wie viel Virtualität soll es denn sein?* BuB 54, 10/11 2002, S.621-632
- [6] Lugger, K.-M., Kraus, H.: *Mastering the Human Barriers in Knowledge*, Proc. of I-KNOW'01, J.UCS 1 2001
- [7] Ohm, C., Revheim, J., Hauge, J. H., *The Integration of research Information sources at university level*, Proc. EUNIS, Bonn 2002
- [8] Zimmermann, K.: *Die Anforderungen an ein wissenschaftliches Informationsportal für die Telekommunikation* Proc. ISKO'02 (to be published 2003)
- [9] Zimmermann; K.: *Vom Salon zum Internetportal - Auswirkungen auf die wissenschaftliche Kommunikationskultur* digitalBIEDERMEIER, Wien, November 2002
- [10] Zimmermann, K.: *A Research Information Portal for Telecommunications*, IEEE Proc. of ISTAS'02 Raleigh, June 2002, pp. 143-149
- [11] Zimmermann, K.: *Informationsmanagement in der Telekommunikation*, e&i pp. a13-a15, heft 2 Februar 2002

Fragen, Anregungen ?



[zimmermann@ftw.at](mailto:zimmermann@ftw.at)

<http://userver.ftw.at/kerstin>