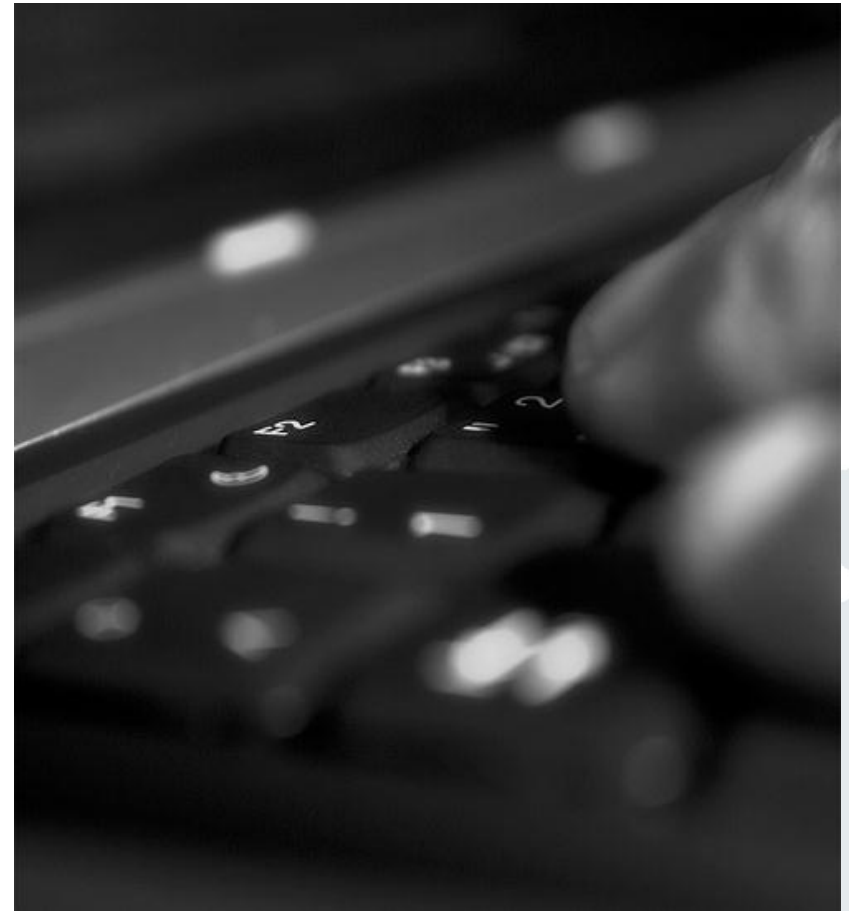


## Lecture 1 Business Informatics 2 (PWIN)

## Introduction & Course Organisation

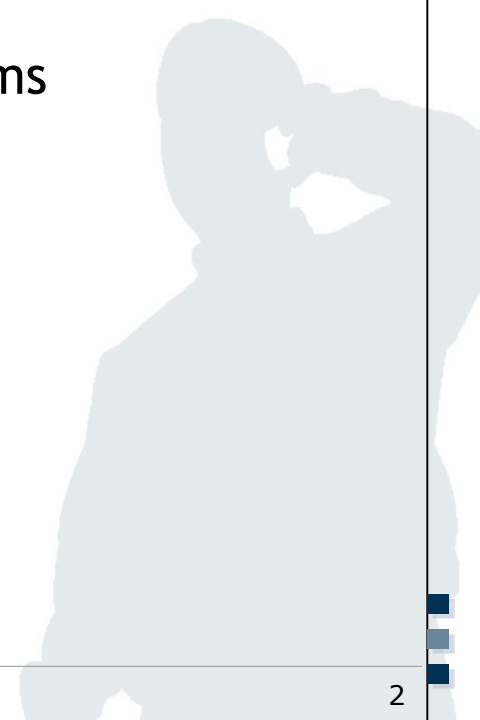
SS 2011

Dr. Andreas Albers  
[www.m-chair.net](http://www.m-chair.net)



Jenser (Flickr.com)

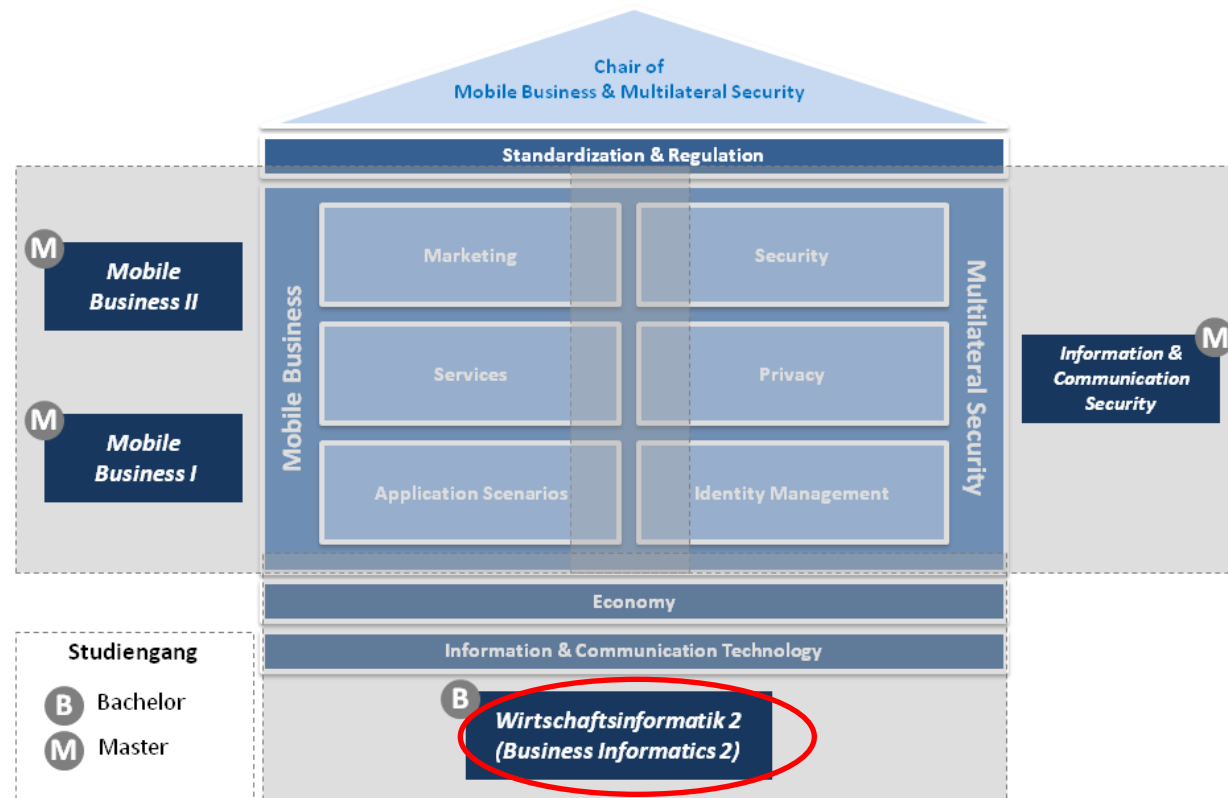
- Introduction of the Chair
- Course Organisation
- Scope and Outline of the Course
- Introduction to Information & Communication Systems



## Department “Business Informatics” @ Goethe University Frankfurt

<p><b>e-Finance</b></p> <p>Prof. Dr. Peter Gomber</p>	<p><b>Media Services</b></p> <p>PD Dr. Hans-Dieter Groffmann</p>	<p><b>Information Systems Engineering</b></p> <p>Prof. Dr. Roland Holten</p>
<p><b>Business Education (associated)</b></p> <p>Prof. Dr. Manfred Horlebein</p>	<p><b>Business Education (associated)</b></p> <p>Prof. Dr. Eveline Wuttke</p>	<p><b>Financial Services</b></p> <p>Prof. Dr. Clemens Jochum</p>
<p><b>Information Systems &amp; Information Management</b></p> <p>Prof. Dr. Wolfgang König</p>	<p><b>Mobile Business &amp; Multilateral Security</b></p> <p>Prof. Dr. Kai Rannenber</p>	<p><b>Wirtschaftsinformatik und Simulation (Informatics Depart.)</b></p> <p>TBA</p>

## Chair of Business Administration, especially Business Informatics, Mobile Business and Multilateral Security



Chair of Business Administration, especially Business Informatics, Mobile Business and Multilateral Security

Building „Rechts- und Wirtschaftswissenschaften“  
Grüneburgplatz 1  
60629 Frankfurt am Main

Phone: 069-798/34701

Fax: 069-798/35004

E-Mail: [info@m-chair.net](mailto:info@m-chair.net)

WWW: [www.m-chair.net](http://www.m-chair.net)

## Vita of Kai Rannenberg

Einbeck, Göttingen, Eystrup, Wolfsburg, ...  
TU Berlin (Dipl.-Inform.)  
Uni Freiburg (Dr. rer. pol.)

Dissertation on “**Kriterien und Zertifizierung mehrseitiger IT-Sicherheit**“  
Standardization at ISO/IEC JTC 1/SC 27 and DIN NI-27

Kolleg “**Sicherheit in der Kommunikationstechnik**“  
Gottlieb Daimler- and Karl Benz-Foundation

**Multilateral Security:**  
“Empowering Users, Enabling Applications“, 1993 - 1999

### Recent History

1999-09 till 2002-08

Microsoft Research Cambridge UK

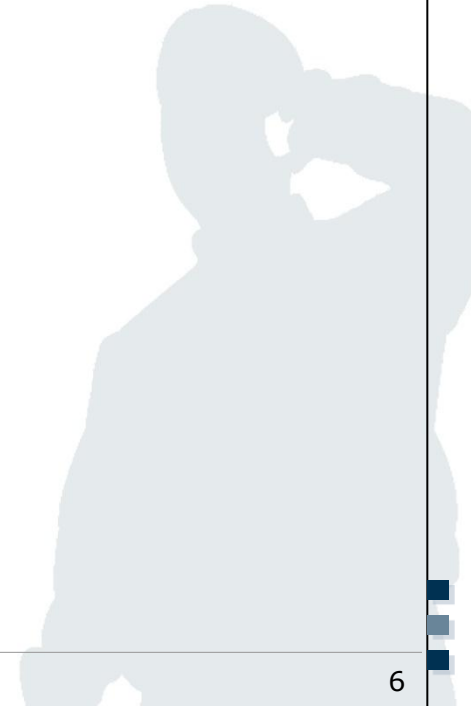
[www.research.microsoft.com](http://www.research.microsoft.com)

Responsible for “Personal Security Devices and Privacy Technologies“

2001-10 Call for this chair

2001-12 till 2002-07 Stand-in for the chair

Since 2002-07 Professor



- Dissertation on  
“Commercialisation of Context-sensitive Mobile Attention in Mobile Media Markets”
- Assistant Professor at the Chair since July 2010
- Recent Research Interests:
  - Two-sided Business Models in the (Mobile) Internet
  - Identity Management Enabler Services
  - Privacy and Mobile Identity Management
  - Impacts between Online Privacy and Online Business
  - Context-sensitive Mobile Marketing
- Current Project: PREMIUM Services
  - Development of Model for the Pricing of Context-sensitive Mobile Consumer Contacts to be sold to Advertisers
  - Development of Pricing Web Service Platform for delivering these pricing models to Mobile Marketing Providers for the sale of their Context-sensitive Mobile Consumer Contacts



Premium\*

Premium|Services



Kai Rannenber



Andreas Albers



Ioannis  
Krontiris



Gökhan Bal



André Deuker



Marvin Hegen



Stephan Heim



Christian Kahl



Sascha Koschinat



Markus  
Tschersich



Christian Weber



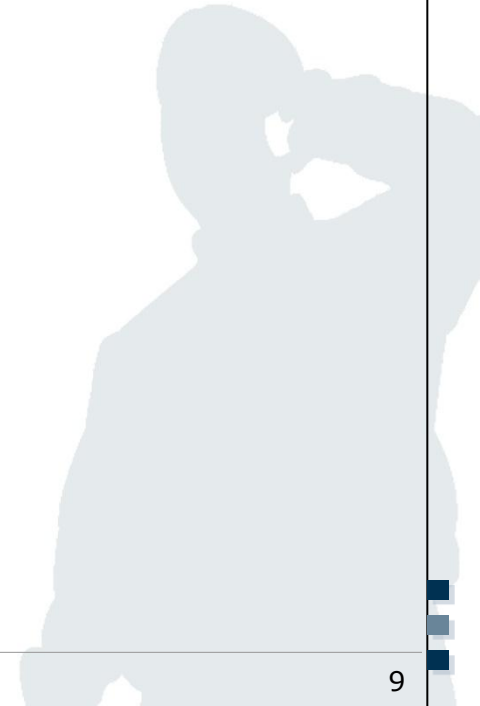
Lars Wolos



Katja Böttcher



Ahmad Sabouri





Evgenia Pisko



Mike Radmacher



Denis Royer



Falk Wagner



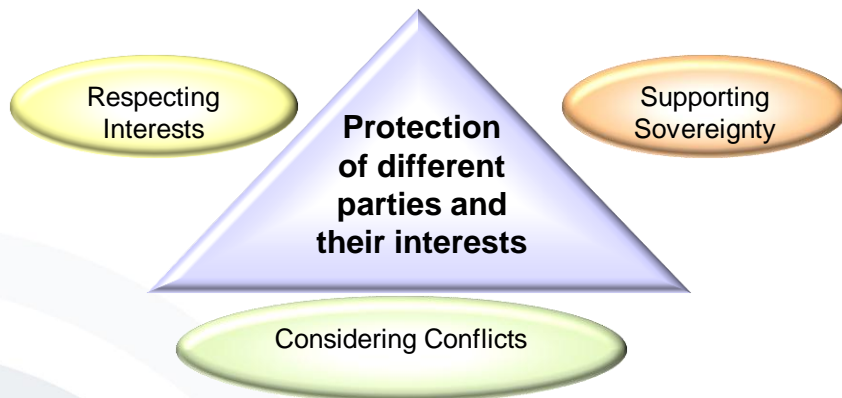
Stefan Weiss



Thomas Leiber

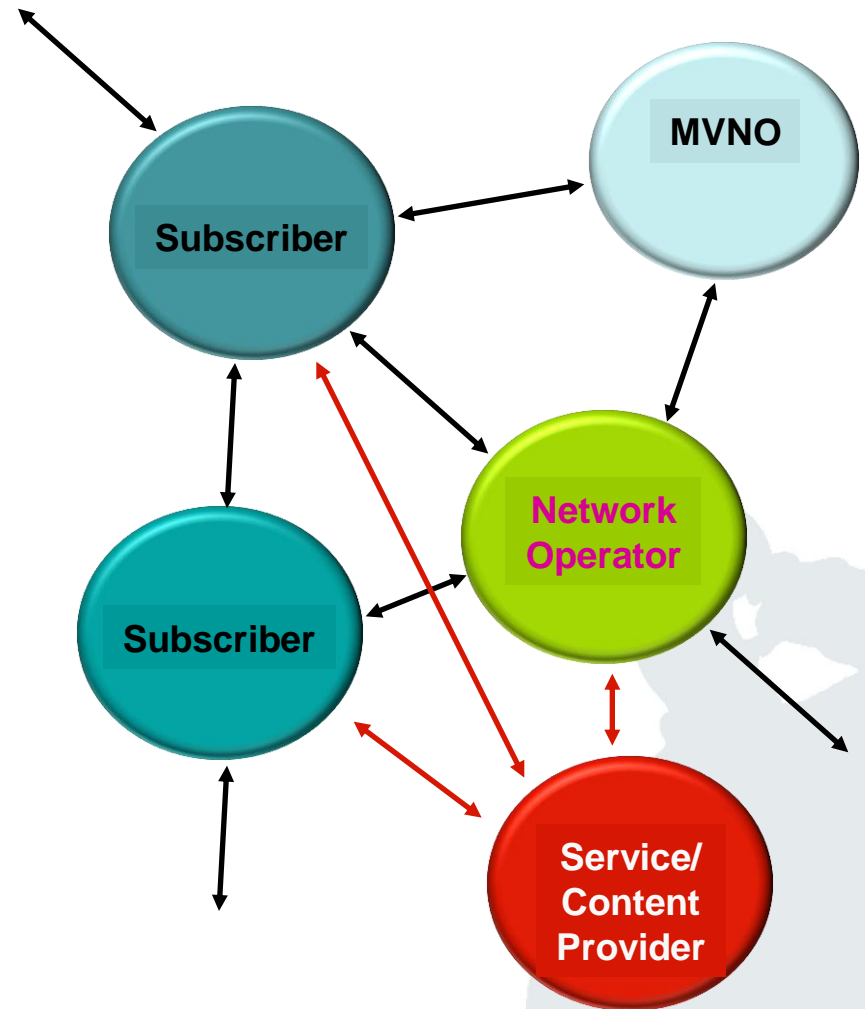
## Different Parties with different Interests

- Customers/Merchants
- Communication partners
- Citizens/Administration



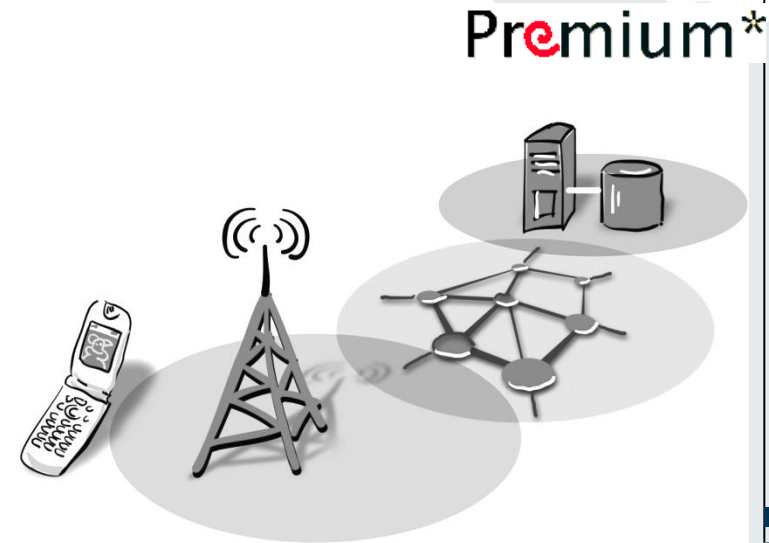
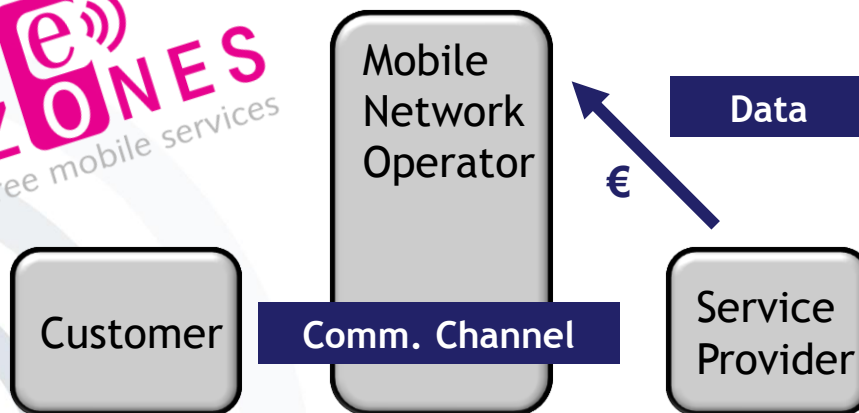
... in a world of consortia

- more partners
- more complex relations



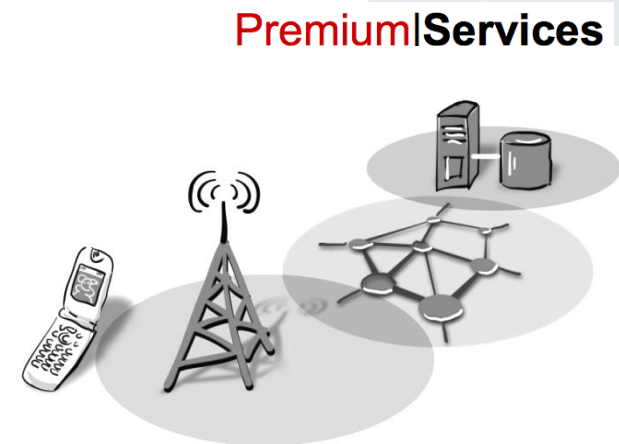
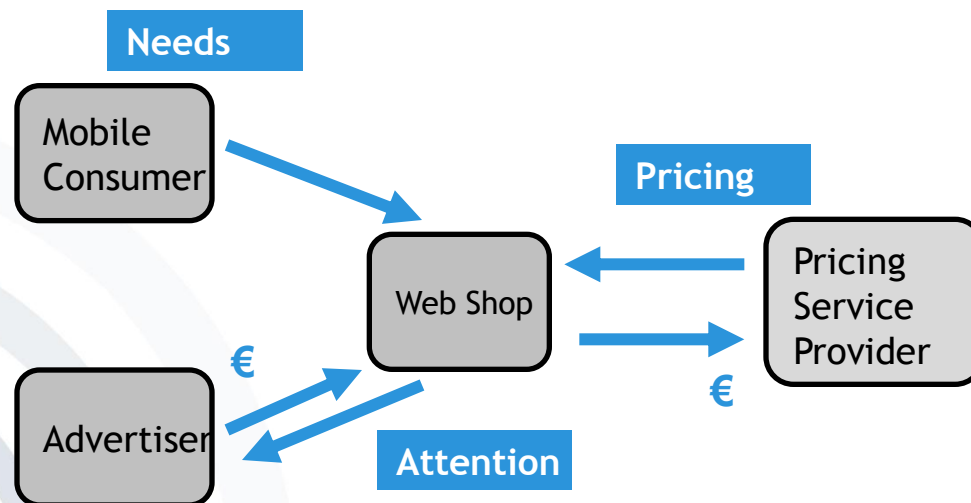
- **Potential:** Mobile network operators have a customer relation with most of the German population!
- **Offering:** Mobile network operators are providing service providers with a communication channel to potential customers.
- **Motivation:** Service providers gain higher, mobile initiated revenues in their business.
- **Objective:** Eliminating data costs for customers while making them marketing costs for service providers.

free ZONES  
Enjoy free mobile services



## Research on Pricing Mechanisms for Context-sensitive Mobile Consumer Contacts offered to Mobile Advertisers

- Design of dynamic, interactive pricing mechanism to address the unique characteristics of Context-sensitive Mobile Consumer Contacts
- Development of an Evaluation Tool for Advertisers in order to determine the value of mobile consumers in their current usage situation
- Implementation of Pricing Service Platform for the webservice-based provision of Pricing Mechanisms to SMEs (e.g. Online Webshops)





- Enhance privacy for typical LBS
  - Pharmacy search (“pull”)
  - Pollen warning (“push”)
- Address wide user range by making only few requirements on the existing infrastructure
  - Simple WAP mobile phone (Version 1), Java phone (Version 2)
- Several challenges
  - Privacy problems
  - Regulation, e.g. of the handling of personal information (and mobile services in general)
  - Business constraints
    - Easy integration into existing infrastructure
    - Applicability to a wide range of business models
    - Adaptability for different market structures

- PICOS - „Privacy and Identity Management for Community Services“
- EU FP 7 Challenge “Secure, dependable and trusted Infrastructures”
- Duration: 3 Years from Feb. 2008
- Project budget: € 6 Mio, EC grant: € 4 Mio
- Balanced mixture of industrial and academic partners



## Main questions:

- What are the trust, privacy and identity issues in new context-rich mobile communication services, especially community-supporting services?
- How can information flows and privacy requirements be balanced in complex distributed service architectures)?
- How can these issues be solved in an acceptable, trust-worthy, open, scalable, manner?
- Which supporting services and infrastructures do the stakeholders need?

## Expected results:

- A set of interdisciplinary requirements for trustworthy, privacy-friendly community transactions.
- A platform prototype that demonstrates the provision of state-of-the-art privacy and trust technology to community applications.
- User-centric trials that validate its applicability.

- “Privacy and Identity Management for Life”
- EU FP7 Challenge “Secure, dependable and trusted Infrastructures”
- Integrated Project
- Duration: 3 Years from March 2008
- EC contribution : ~€ 10 Mio
- Partners
  - IBM, Microsoft, SAP, Giesecke & Devrient, W3C, and more...



Giesecke & Devrient  
security at work.



- Providing Privacy *throughout Life*: PrimeLife!
    - ... digital footprints left over lifetime
    - ... in emerging Internet applications
    - ... user-centric and configurable
  - Making Privacy Real: PrimeLife!
    - Making results of PRIME (FP6) and PrimeLife widely usable and deployed
    - Cooperating with other projects for transferring PRIME and PrimeLife technologies and concepts
  - Advancing State-of-the-Art in Technology supporting Privacy and Identity Management
    - Mechanisms, HCI, Policies, Infrastructure
- ... Building on results and expertise of PRIME





## Concept and project objective(s)

The goal of ABC4Trust is to address the federation and interchangeability of technologies that support trustworthy yet privacy-preserving Attribute-based Credentials (ABC). So far credentials such as digitally signed pieces of personal information or other information used to authenticate or identify a user where not designed to respect the users privacy. They invariably reveal the identity of the holder even though the application at hand often needs much less information, for instance only confirmation that the holder is a teenager or is eligible for social benefits. In contrast to that, Attribute-based Credentials allow a holder to reveal just the minimal information required by the application, without giving away full identity information. These credentials thus facilitate the implementation of a trustworthy and at the same time privacy-protecting digital society.

### The objectives of ABC4Trust are:

- to define a common, unified architecture for ABC systems to allow comparing their respective features and combining them on common platforms, and
- to deliver open reference implementations of selected ABC systems and deploy them in actual production pilots allowing provably accredited members of restricted communities to provide anonymous feedback on their community or its members.

### Project Partners:

[GOETHE-UNIVERSITY FRANKFURT](#)

ALEXANDRA INSTITUTE AS  
RESEARCH ACADEMIC COMPUTER TECHNOLOGY  
INSTITUTE  
IBM RESEARCH GMBH  
MIRACLE A/S  
NOKIA-SIEMENS NETWORKS GMBH & CO. KG

TECHNISCHE UNIVERSITÄT DARMSTADT  
UNABHÄNGIGES LANDESZENTRUM FÜR DATENSCHUTZ  
EURODOCS AB  
CRYPTOEXPERTS SAS  
MICROSOFT RESEARCH AND DEVELOPMENT FRANCE  
SÖDERHAMN KOMMUN

(c) 2010 ABC4Trust. ABC4Trust receives research funding from the [7<sup>th</sup> Research Framework Program \(FP7\) of the EU](#) as part of the [Trust & Security](#) Program.



## About:

GINI-SA project aims to investigate and set the foundations for the architectural, legal, regulatory requirements and the provisioning and privacy enhancing aspects of a framework of **user-centric identity management services**.

## Project Vision:

Work towards the vision of a **Personal Identity Management environment**, where

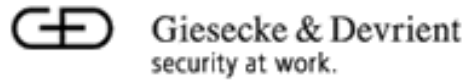
- **individuals** will be able to **manage** their own **identity space** (Individual Digital Identity - INDI)
- **user-specific identity services** will be available in the INDI space with certain **privacy protection and privacy enhancement** provisions.



- **The challenge: “Identity” is changing**
  - IT puts more HighTech on ID cards.
  - Profiles may make the „traditional“ ID concept obsolete.
  - New IDs and ID management systems are coming up (e.g. GSM, OpenID).
  - Europe (the EU) consider joint ID and ID management systems.
  
- **Vision and Facts**
  - Europe will develop a deeper understanding of how appropriate identification and Identity management can progress the way to a fairer European information society
  - Network of Excellence in EU Framework Programme 6 (2004-04-01 - 2009-06-30)
  - 24 partners from academia, industry, governmental organisations including INSEAD, LSE, IBM, Microsoft EMIC, ICPP
  - More at: [www.fidis.net](http://www.fidis.net)
  
- **Selected M-Chair Contributions**
  - Coordination of the whole network (administrative, presentation, etc.)
  - What makes an identity mobile based on the FIDIS identity concept?
  - State of the art of mobile identity management technologies
  - Standardisation (Liaison with ISO/IEC JTC 1/SC 27/WG 5)

- Multilateral Security, Privacy, and Identity Management in
  - IT Security Evaluation
    - Criteria (IS 15408, Common Criteria)
    - Certification
  - Standardisation (in ISO/IEC JTC 1/SC 27)
    - WG 3: IT Security Evaluation Criteria
    - WG 5: Identity Management and Privacy Technologies
- Standardisation and regulation (EU ENISA Management Board, ...)

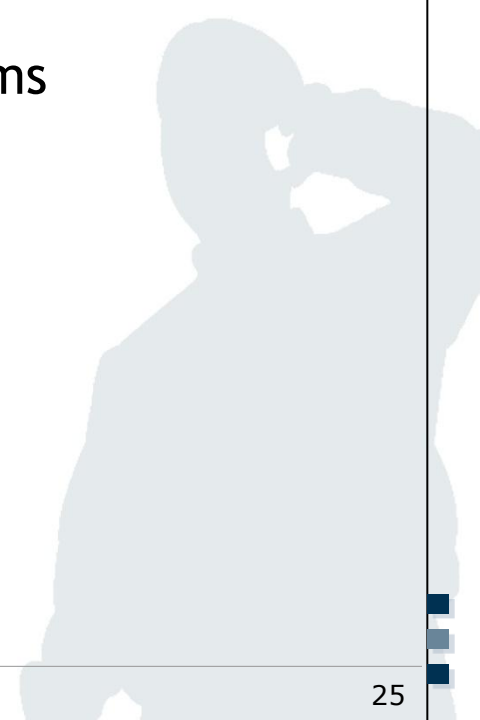




and many more ...

	SS 2011	WS 2011/2012
Bachelor	<p><i>Course</i>  <b>„ Business Informatics 2 (PWIN)“</b></p>	<p><i>Course</i>  <b>„Business Informatics 2 (PWIN) “</b></p> <p><i>Course (not fixed yet)</i>  <b>Einführung in Mobile Business</b></p>
Master	<p><i>Course</i>  <b>Mobile Business II:          „Application Design, Applications,          Infrastructures, and Security“</b></p> <p><i>Course</i>  <b>„ Informations- und          Kommunikationssicherheit:          Infrastrukturen, Technologien und          Geschäftsmodelle</b></p> <p><i>Seminar</i>  <b>„The future of social networking          applications in the information society“</b></p>	<p><i>Course</i>  <b>Mobile Business I:          “Technology, Markets, Platforms, and          Business Models“</b></p> <p><i>Block Course</i>  <b>Mobile Business &amp; Applications</b></p> <p><i>Seminar</i>  <b>„TBA“</b></p>

- Introduction of the Chair
- Course Organisation
- Scope and Outline of the Course
- Introduction to Information & Communication Systems



## Dr. Andreas Albers

Chair of Mobile Business & Multilateral Security  
Goethe-University Frankfurt am Main

Building „Rechts- und Wirtschaftswissenschaften“  
Office 2.221 (2nd floor)  
Grüneburgplatz 1  
60629 Frankfurt am Main

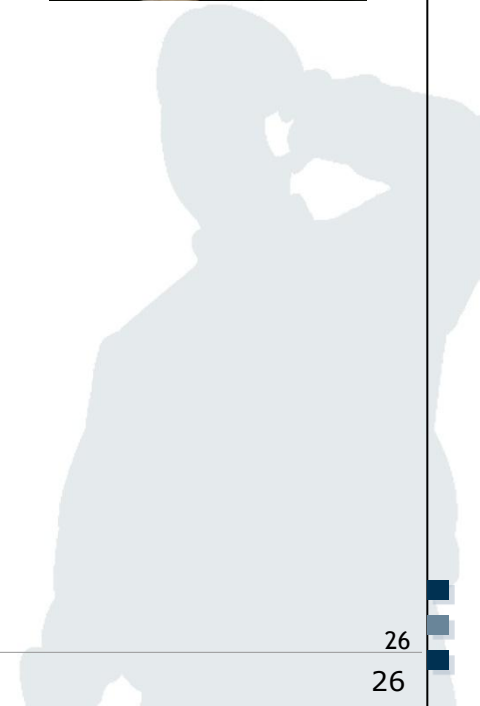
Phone: +49 (0)69-798/34667

Fax: +49 (0)69-798/35004

E-Mail: [andreas.albers@m-chair.net](mailto:andreas.albers@m-chair.net)

WWW: [www.m-chair.net/andreasalbers](http://www.m-chair.net/andreasalbers)

*Consultation hours on appointment*



Dipl.-Wirt.-Inf. Stephan Heim

([www.m-chair.net/stephanheim](http://www.m-chair.net/stephanheim))



Dipl.-Kfm. Lars Wolos

([www.m-chair.net/larswolos](http://www.m-chair.net/larswolos))

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E-Mail contact: [win@m-chair.net](mailto:win@m-chair.net)

## Secretary:

Elvira Koch

E-Mail: [elvira.koch@m-chair.net](mailto:elvira.koch@m-chair.net)

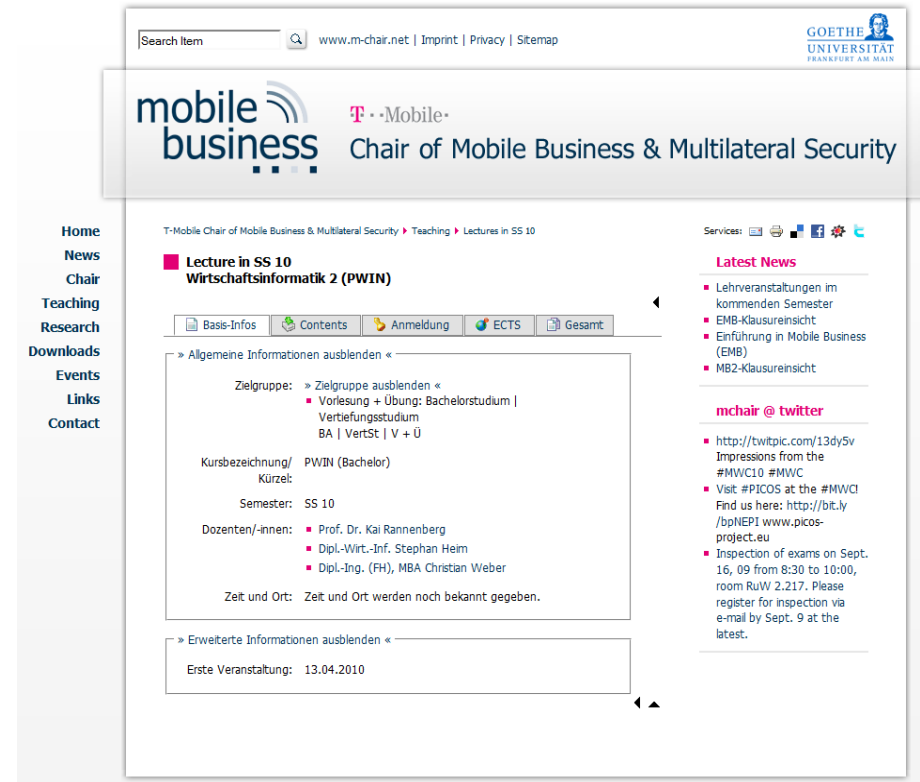
WWW: [www.m-chair.net/elvirakoch](http://www.m-chair.net/elvirakoch)

Office Hours:


Mon.- Fri. 10am - 2pm



- **Course Slides**
  - Slides of the course can be downloaded from the website of the Chair at [www.m-chair.net](http://www.m-chair.net)
  
- **Online News**
  - News about the course (e.g. room changes, announcements, etc.)
  - Available via website of Chair, RSS feed or e-Mail newsletter. For subscription, log onto [www.m-chair.net](http://www.m-chair.net)
  
- **Mobile Website**
  - For information relevant on the way
  - [m.m-chair.net](http://m.m-chair.net)
  
- **Twitter Updates**
  - Additional urgent, short notice information
  - Follow [@mchair](https://twitter.com/mchair)



The screenshot shows the website interface for the Chair of Mobile Business & Multilateral Security. The main content area displays details for a lecture in SS 10 titled 'Wirtschaftsinformatik 2 (PWIN)'. The page includes a search bar, navigation menu, and social media links.

**mobile business**  Chair of Mobile Business & Multilateral Security

Search Item  [www.m-chair.net](#) | [Imprint](#) | [Privacy](#) | [Sitemap](#)

GOETHE UNIVERSITÄT FRANKFURT AM MAIN

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T-Mobile Chair of Mobile Business & Multilateral Security ▶ Teaching ▶ Lectures in SS 10

**Lecture in SS 10**  
**Wirtschaftsinformatik 2 (PWIN)**

Basis-Infos Contents Anmeldung ECTS Gesamt

> Allgemeine Informationen ausblenden <

Zielgruppe: **Zielgruppe ausblenden <**

- Vorlesung + Übung: Bachelorstudium | Vertiefungsstudium BA | VertSt | V + Ü

Kursbezeichnung/ Kürzel: PWIN (Bachelor)

Semester: SS 10


Dozenten/-innen: **Dozenten/-innen ausblenden <**

- Prof. Dr. Kai Rannenberg
- Dipl.-Wirt.-Inf. Stephan Heim
- Dipl.-Ing. (FH), MBA Christian Weber

Zeit und Ort: Zeit und Ort werden noch bekannt gegeben.

> Erweiterte Informationen ausblenden <

Erste Veranstaltung: 13.04.2010

Services: 

**Latest News**

- Lehrveranstaltungen im kommenden Semester
- EMB-Klausureinsicht
- Einführung in Mobile Business (EMB)
- MB2-Klausureinsicht

**mchair @ twitter**

- <http://twtipic.com/13dy5v> Impressions from the #MWC10 #MWC
- Visit #PICOS at the #MWC! Find us here: <http://bit.ly/bpNEP1> [www.picos-project.eu](http://www.picos-project.eu)
- Inspection of exams on Sept. 16, 09 from 8:30 to 10:00, room RuW 2.217. Please register for inspection via e-mail by Sept. 9 at the latest.

- Exercises
  - Presentation and discussion of exercise results
  - Addressing of open questions from the lectures
  - Preparation for final written exam
- „Mentorium“
  - Preparation, presentation and discussion of exercises in smaller groups of students

All materials are going to be made available on the website of the Chair in advance and should be prepared by the students

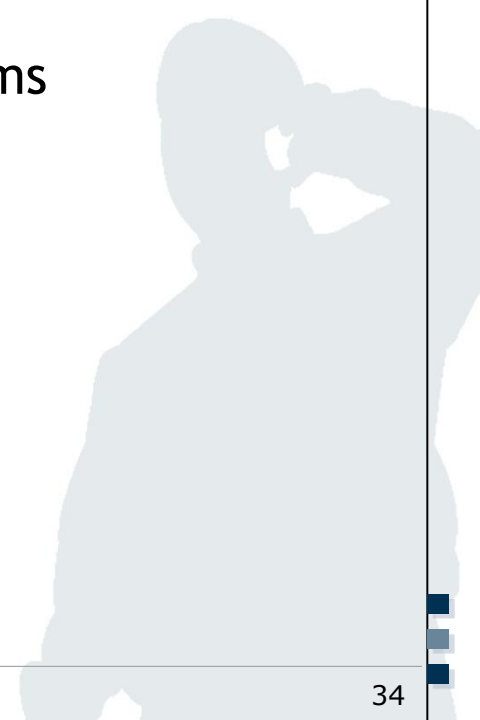
- Duration: 90 minutes
- 6 Credit points
- Date of written exam is going to be posted on the examination office's website
- All lecture and exercise content is relevant unless it is explicitly excluded
- Previous written exams can be found at [www.m-chair.net](http://www.m-chair.net)

# Acceptance of prior Academic Achievements for this Course

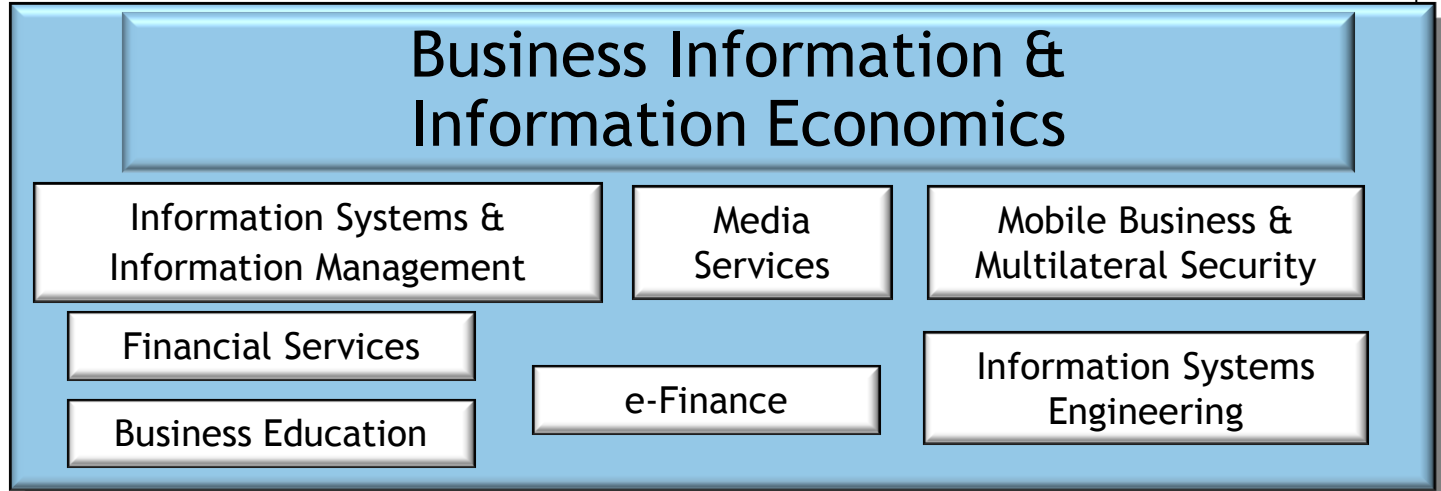
- Acceptance of verified achievements of universities or universities of applied sciences and arts (located in Germany or foreign countries) is possible.
- Academic achievements generally rejected:
  - Apprenticeships of grammar schools, secondary schools, technical colleges, etc.
  - Apprenticeships of vocational schools

- Acceptance will be granted if it is verified that at least 75% of the contents of this course (incl. exercises) was covered and studied at a former university.
- In addition, the weekly number of hours of the course at the former university must be higher or equal to the hours of this course (2L+1E) in order to be accepted .
- The application documents have to consist of an outline of the passed course from the former university, a corresponding certificate and a table of the contents, which shows the overlap with this course (***structured by the outline of this course!***).

- Introduction of the Chair
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Focus Phase

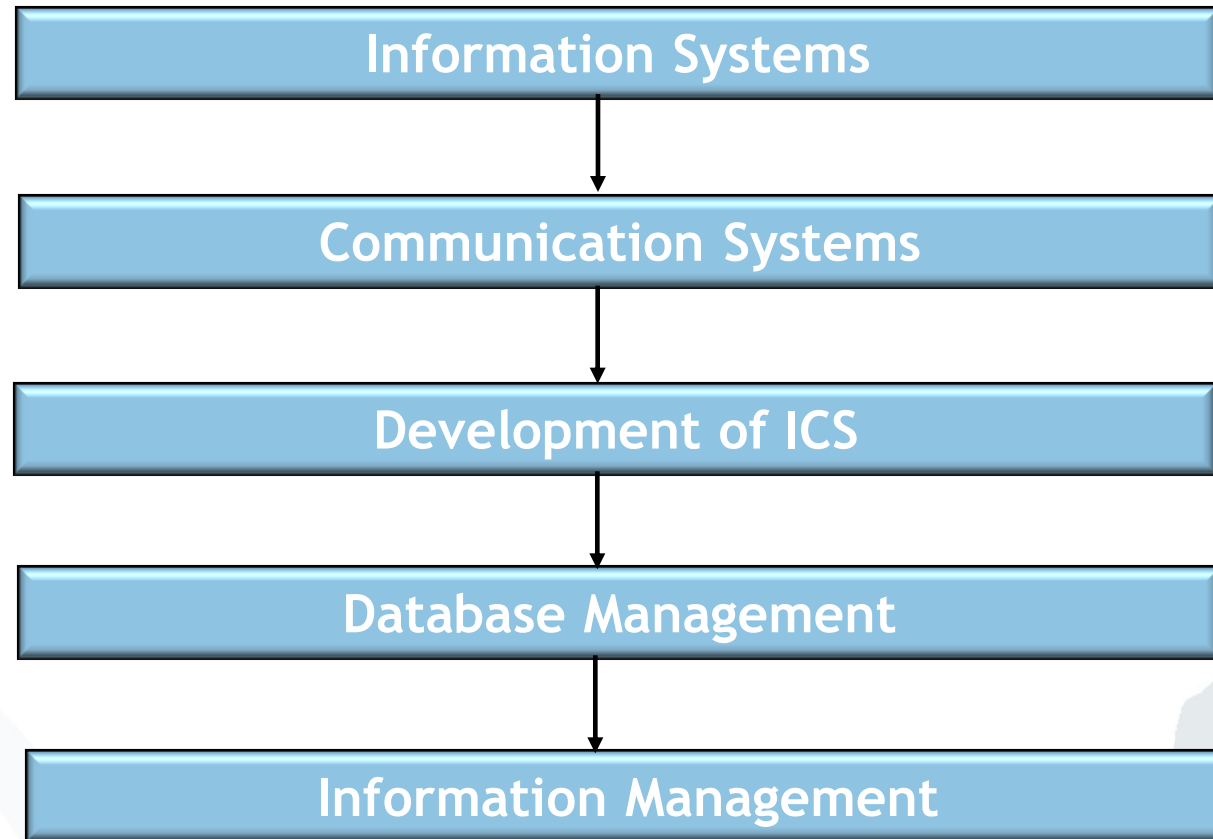


Advanced Phase



Orientation Phase





## Information Systems

Purpose of and Research on Information Systems

Enterprise Modelling

Architectures of Information Systems

Mobile Information Systems

## Communication Systems

Introduction to layer-based Communications

Fixed Networks

Wireless Networks

## Development of ICS

Management of IT-Projects

Modelling of ICS & Model-driven Development (MDA)

Markup Languages

## Database Management

Databases

SQL

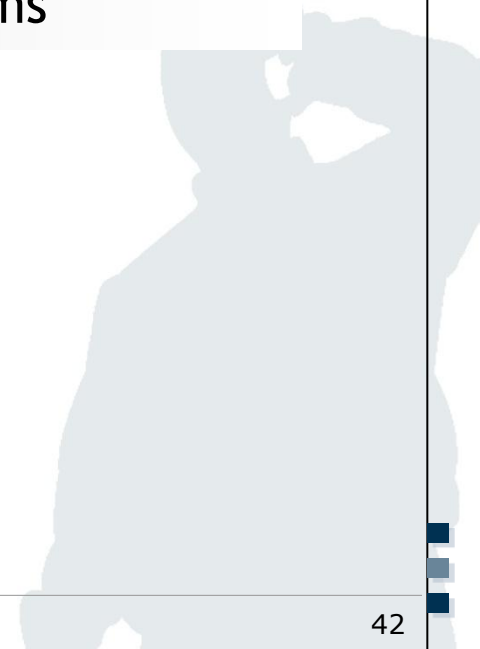
## Information Management

Business Process Reengineering

Business Process Modeling

- **Dr. Jens Nebendahl, CEO T-Systems Multimedia Solutions:**  
*Title (TBA)*
- **Axel Metschies, Strategy Analyst, Google Corporation:**  
*Google beyond Web Search and Advertisements*
  - Please post your questions for Axel at the Google Moderator Service <http://goo.gl/crxkS> (Google account required)
  - The Google Moderator Service collects questions and allows to vote up/down the questions of other students of this course. Thereby, the most interesting questions can be determined for the guest lecture.
  - Or else, send your questions to the Chair and we will post them for you ([win@m-chair.net](mailto:win@m-chair.net))
- **Florian Lieb, PASS Consulting Group:**  
*Model-driven Software Development*

- Introduction of the Chair
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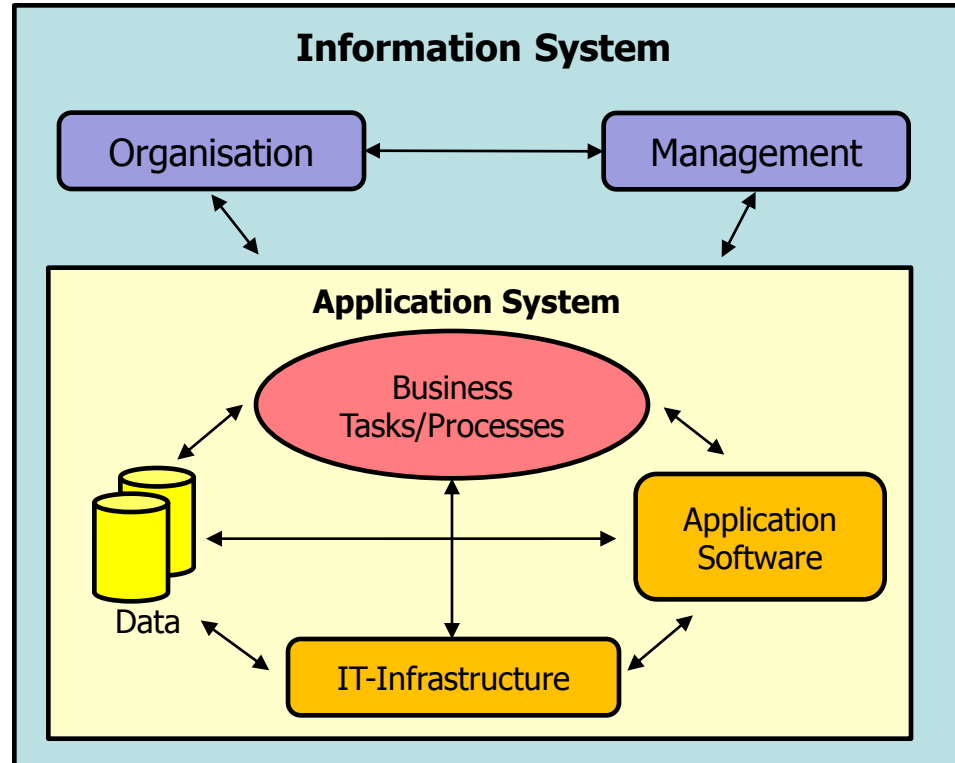


# What is an Information System?

*"A set of interrelated components that collect (or retrieve), process, store, and distribute information to support decision making and control in an organization."*

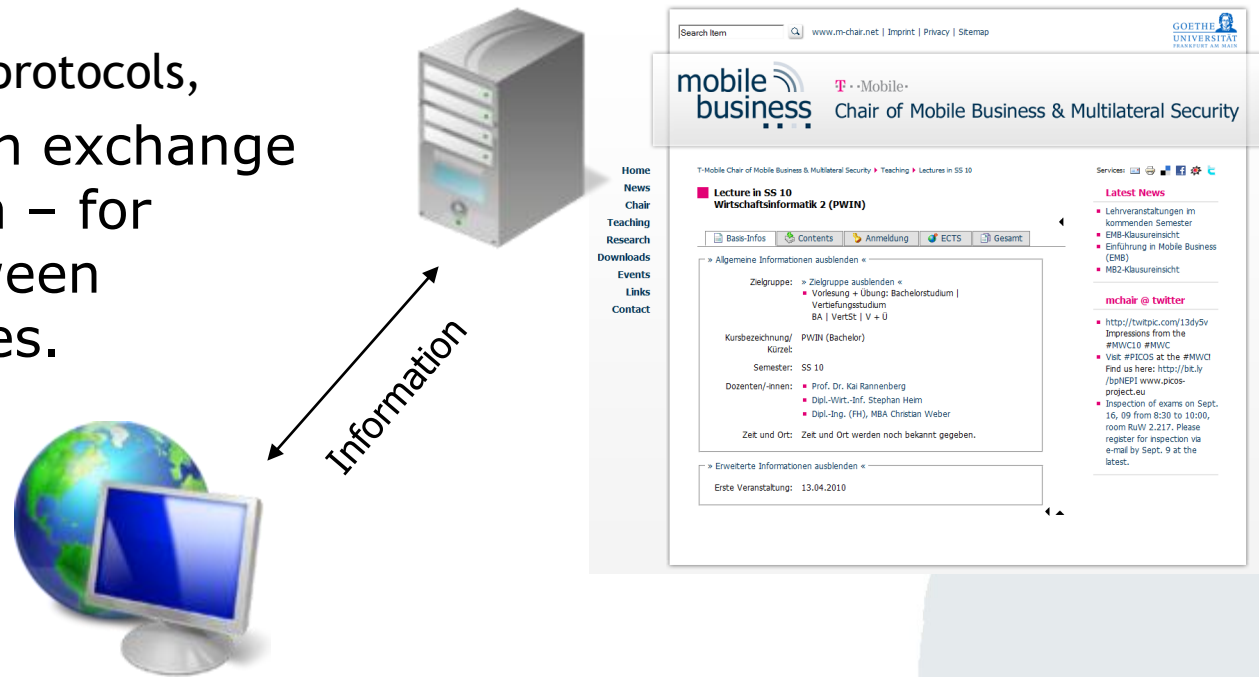
Source: Laudon, Laudon (2009), p. 11

- **Information System (IS):**  
A system which was build to be used as part of an enterprise. It contains all relevant application systems and is embedded into the organisation and management of an enterprise.
- **Application System (AS):**  
A system, which consists of business tasks and processes it supports, the underlying IT-infrastructure, the application software and the data it required in order to accomplish its objectives.



Source: Laudon, K.C., Laudon, J.P., Schoder, D. (2010)

- A communication system is a collection of to each other compatible
  - Hardware (terminals, physical network components),
  - Software (operation systems, network protocols, application systems) and
  - Transmission protocols, which allow an exchange of information – for example between enterprise sites.



- Information Systems (organisational orientation)
  - Designed for an specific operational area of responsibility
  - Considers organisational and basic personal requirements
  - Supports decision making, coordination, controlling and monitoring in enterprises, but even more aids managers and employees to analyse problems, understand complex business cases and develop new products.
- Communication Systems (technical orientation)
  - Physical networking
  - Transmission media
  - Hardware and software

- Laudon, K.C., Laudon, J.P., Schoder, D. (2010) „Wirtschaftsinformatik - Eine Einführung“, Pearson Studium, München.
- Laudon, K. C.; Laudon, J. P. (2009): *Essentials of Management Information Systems*. 8. Aufl., Upper Saddle River.

