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13/1/11

ENTERPRISE MIRRORS

Agenda

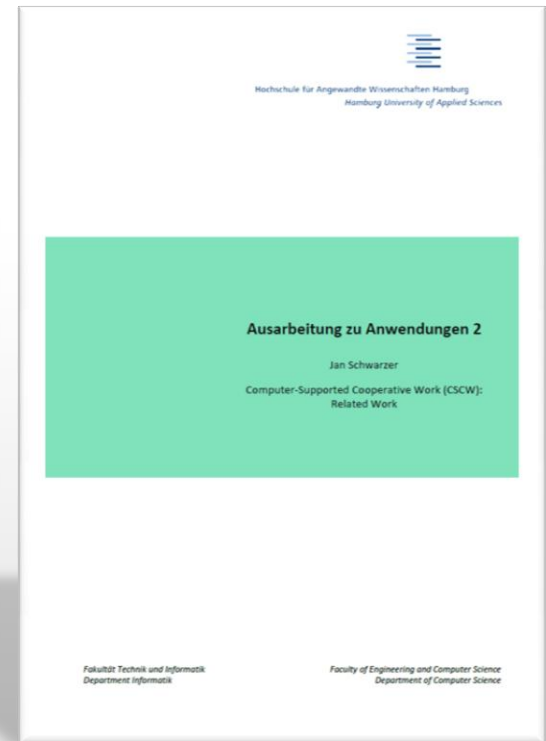
- **Related Work**
- **Idea**
- **Motivation**
- **Context**
- **Challenges**
- **Conclusion and Outlook**
- **References**

RELATED WORK

RELATED WORK

Anwendungen 2

- ***Computer-Supported Cooperative Work (CSCW): Related Work***¹
- **Focus: *CommunityMirrors***²
 - MeetingMirrorTM
 - IdeaMirrorTM
 - **Enterprise Mirror**



¹ <http://users.informatik.haw-hamburg.de/~ubicomp/projekte/master2010-aw2/schwarzer/bericht.pdf>

² <http://www.communitymirrors.net/>

Awareness (1): “[...] an understanding of the activities of others, which provides a context for your own activity [...]”



CommunityMirror

Source: <http://www.kooperationssysteme.de/wp-content/uploads/ott-2008-geneme-ideamirror-praesentation.pdf>

SMART

SAP User Group Community

Grassl

Bezenar

Rösner

Rittmann

37 Result(s)
City: München

Brodhun

Gerber

Krcmar

Jehle

Fienhold

Habis

Wittges

Biggel

Business Card of Krcmar

Prof. Dr.
Helmut Krcmar
SAP HCC TU München
ERP, SOA
München

Interests/Products
Tennis, Skifahren, Innovationen, Wein, SEM, E-Government,
RFID, Health

SAPIENS

004 Zentrale 07
Universitätsverwaltung 07

005 Management
SAP-Lösungen 08

003 Sicherheitskonzept 19
Aussendienstmit

001 FWP (Find Wise People...) 01
07

Die Aufgabe des FWP-Konzepts ist es, die Aufgaben der Mitarbeiter zu definieren und sie so zu organisieren, dass sie optimal erfüllt werden können. Dies geschieht durch die Einbindung der Mitarbeiter in die Entscheidungsfindung und die Verantwortung für die Ergebnisse der Aufgaben.

002 Delegator 11

06
2008

Während der Bearbeitung von Projekten bekommt ein Verantwortlicher Aufträge und Anfragen, die unabhängig von den primären Aufgaben zu erfüllen sind. Viele dieser Anfragen und Aufträge können an andere Mitarbeiter delegiert werden. Dies ist aber nur dann erfolreich, wenn der Prozess der Delegation wenig Zeit in Anspruch nimmt. Der Delegator prüft anhand der Qualifikation und den Kalenderinformationen eines Mitarbeiters, ob dieser für den Auftrag in Frage kommt. Der Auftrag wird als Aufgabe an den Mitarbeiter geschickt und verbleibt bis zur endgültigen Annahme in einer Warteschlange. Ist eine Aufgabe nach einer definierten Zeit nicht angenommen worden, wird sie alternativem Mitarbeiter gewandt und als keine Mitarbeiterverfüge über die Kalenderformale Information.

Die Aufgabe des FWP-Konzepts ist es, die Aufgaben der Mitarbeiter zu definieren und sie so zu organisieren, dass sie optimal erfüllt werden können. Dies geschieht durch die Einbindung der Mitarbeiter in die Entscheidungsfindung und die Verantwortung für die Ergebnisse der Aufgaben.

Projekt 2

- **HAW Mirror**

- Teamwork with *Lorenz Barnkow*³
- Idea: Developing a multitouch-based information platform for students

³ <http://users.informatik.haw-hamburg.de/~ubicomp/projekte/master2010-proj1/barnkow.pdf>

Raumbelegung

Mitarbeiter / Professoren



Versuchungspläne

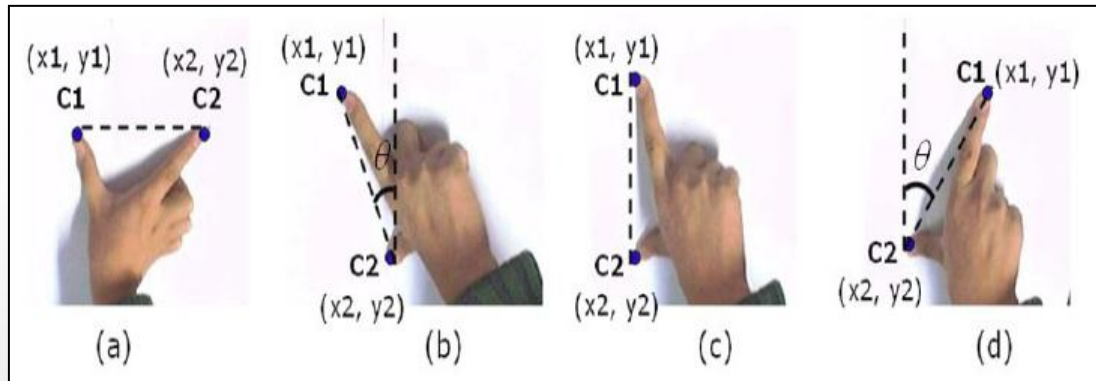


Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

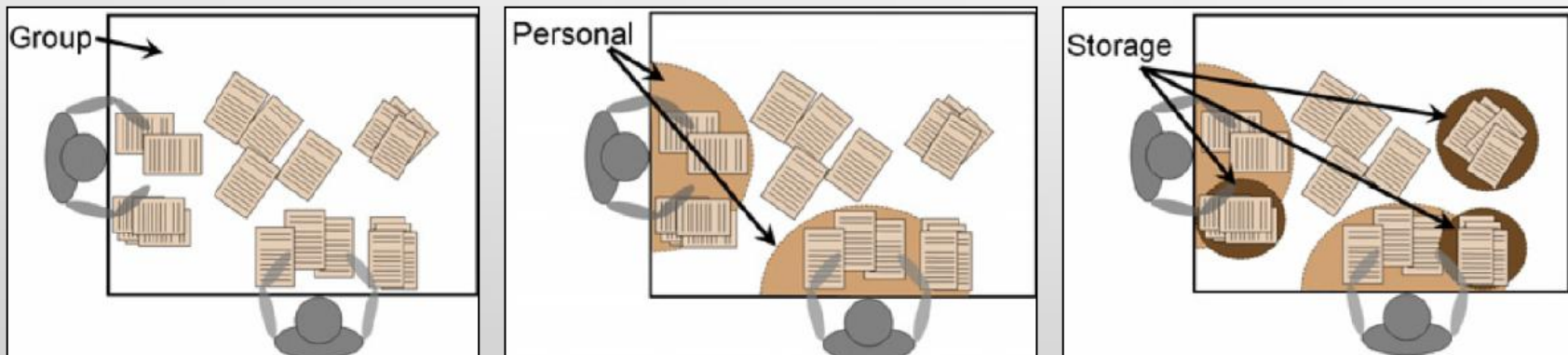
IDEA

Other interesting stuff

- **Gesture cognition (2):**



- **Analysis of territoriality behaviours (3):**



My building lot

- Developing a multitouch-based *Social Network Service (SNS)*⁴ for enterprises
→ „Enterprise Mirror“
 - Using the *.NET Framework 4.0*⁵ (*WPF 4.0*⁶)
 - Based on *Windows 7 operating system*⁷

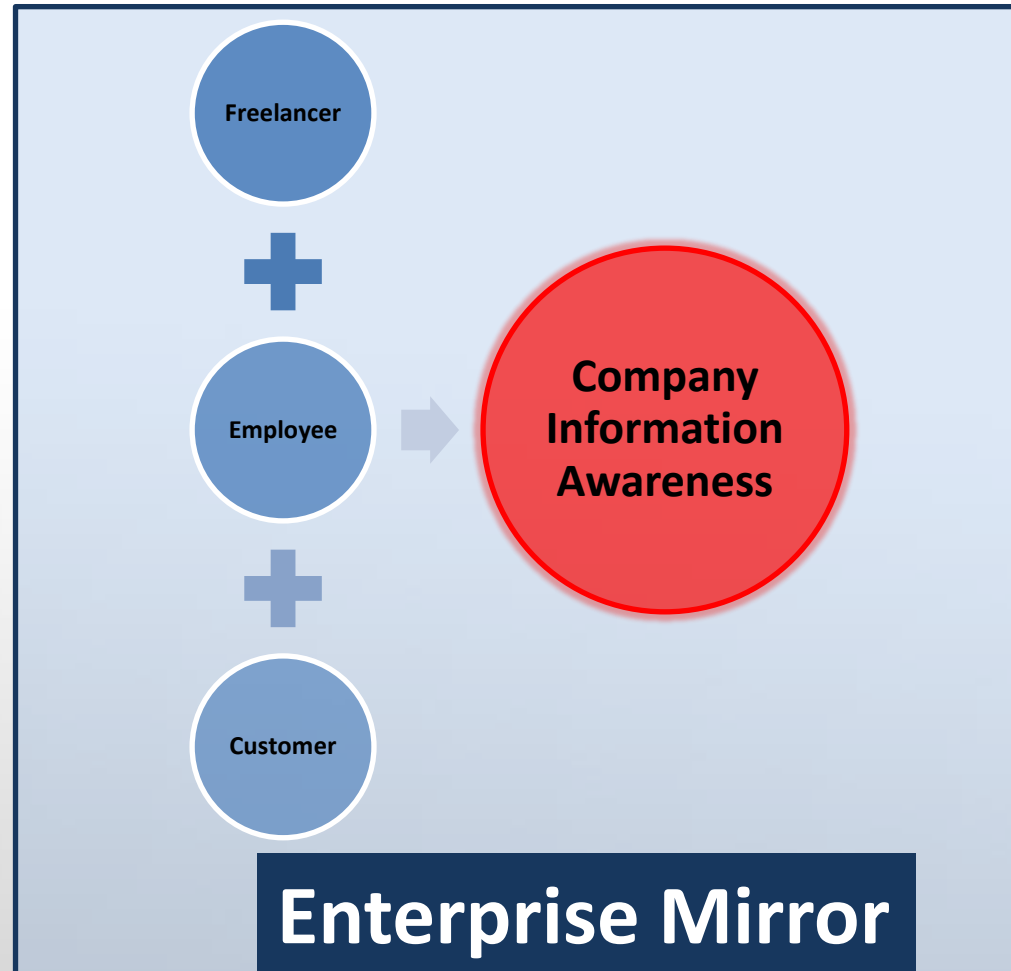
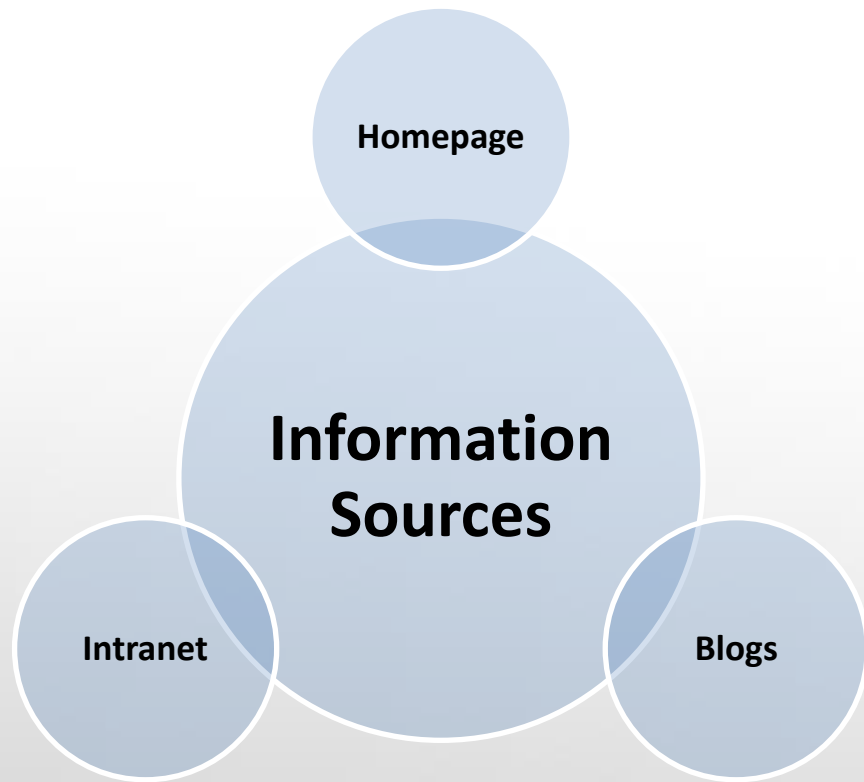
⁴ http://en.wikipedia.org/wiki/Social_network_service

⁵ <http://www.microsoft.com/net/>

⁶ http://en.wikipedia.org/wiki/Windows_Presentation_Foundation

⁷ <http://www.microsoft.com/windows/windows-7/>

Context: *Enterprises*



E.g. *HanseVision GmbH*⁸

⁸ <http://www.hansevision.de/>, <http://blogs.myfirstsharepoint.de/>

MOTIVATION

Personal issues

- **Fields of interest, such as:**
 - WPF and C#⁹ programming
 - Multitouch-based applications
 - CommunityMirrors
- **(!) Combination of interaction, programming and design (XAML¹⁰ in terms of WPF) in one application**

⁹ http://en.wikipedia.org/wiki/C_Sharp_%28programming_language%29

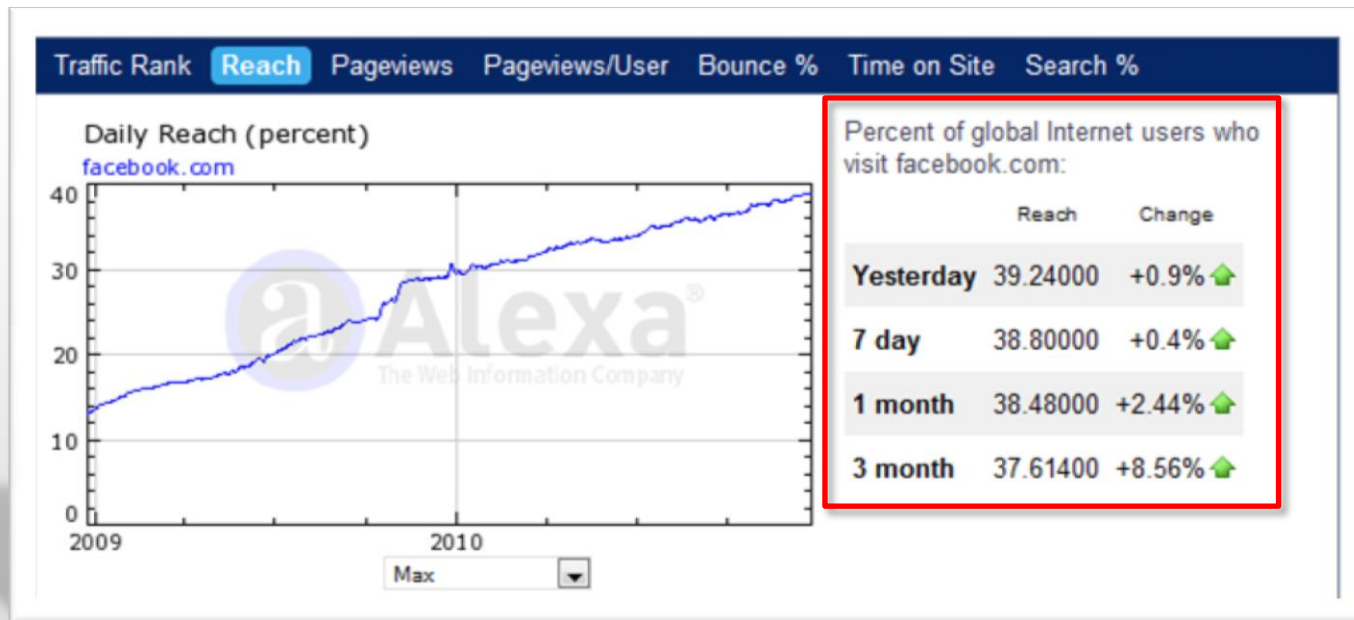
¹⁰ http://de.wikipedia.org/wiki/Extensible_Application_Markup_Language

Some other issues

- **Social network services has the potential to optimize the collaboration and thereby also the innovation of a company (4 S. 9)**
- **Richter and Koch quoting Cohen and Prusak (5 S. 1):**
“[...] high potential of networking employees to increase productivity and speed of innovation in companies.”
- **Richter and Koch (5 S. 1):**
“Social Networking Services (SNS) are the fastest growing type of social software – both in the Internet and in company-wide Intranets.”, (...)

Example: *Facebook*¹¹

- 2nd of the top 500 sites on *alexa.com*¹² (6)



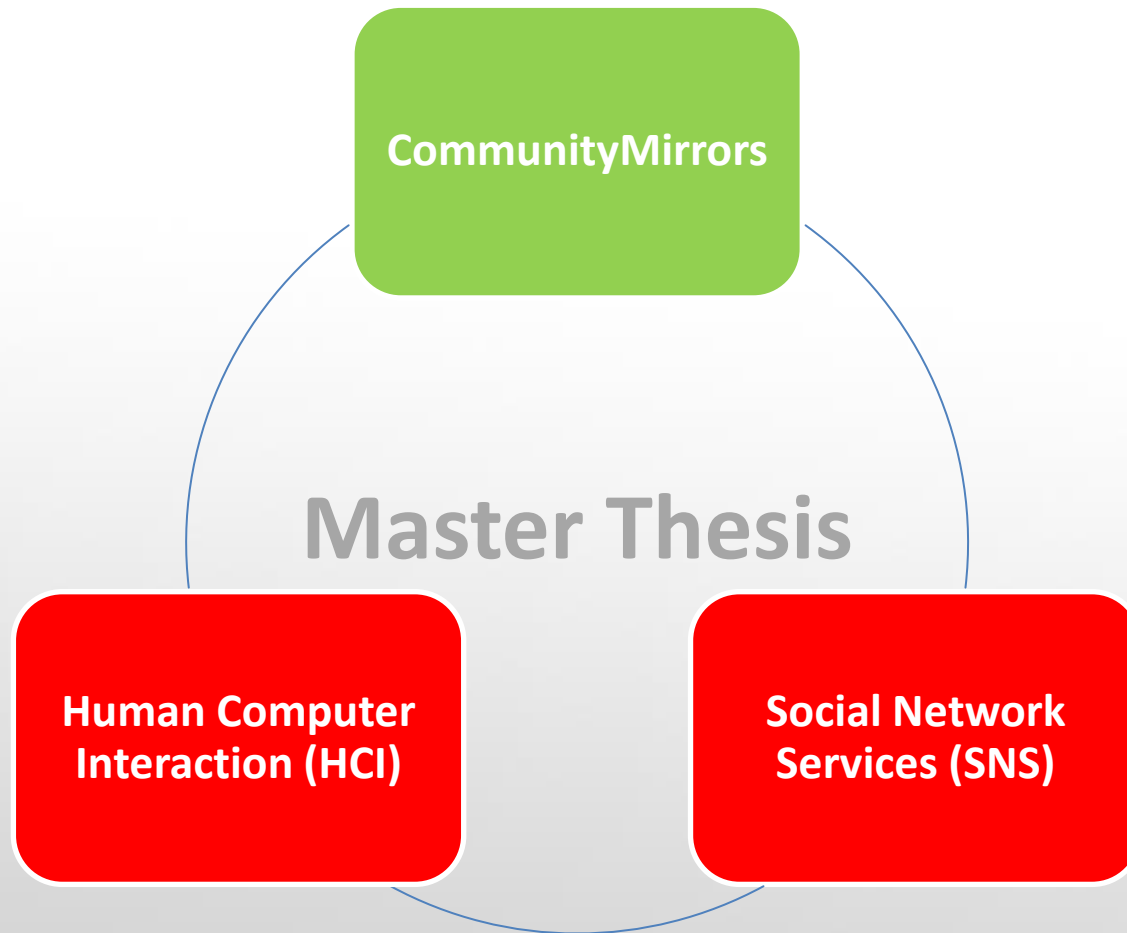
Source: <http://www.alexa.com/siteinfo/facebook.com>

¹¹ <http://www.facebook.com/>

¹² <http://www.alexa.com/>

CONTEXT

Computer-Supported Cooperative Work (CSCW)



Social Network Services (SNS) ...

- ... are applications or web services which **(7 S. 2, 5 S. 3)**:
 - Visualize personal information
 - Connect people
 - Provide an expert search
 - Increase network or context awareness
 - Assist in the exchange of information

Models

- **Open Social Network Services**

- Internet-based, such as *Twitter*¹³, *Facebook*¹⁴, *studivZ*¹⁵, etc.

- **Closed Social Network Services**

- Intranet-based (limited to a special audience)
- Distinctive feature: Integration and combination of company services (7 S. 8)

¹³ <http://twitter.com/>

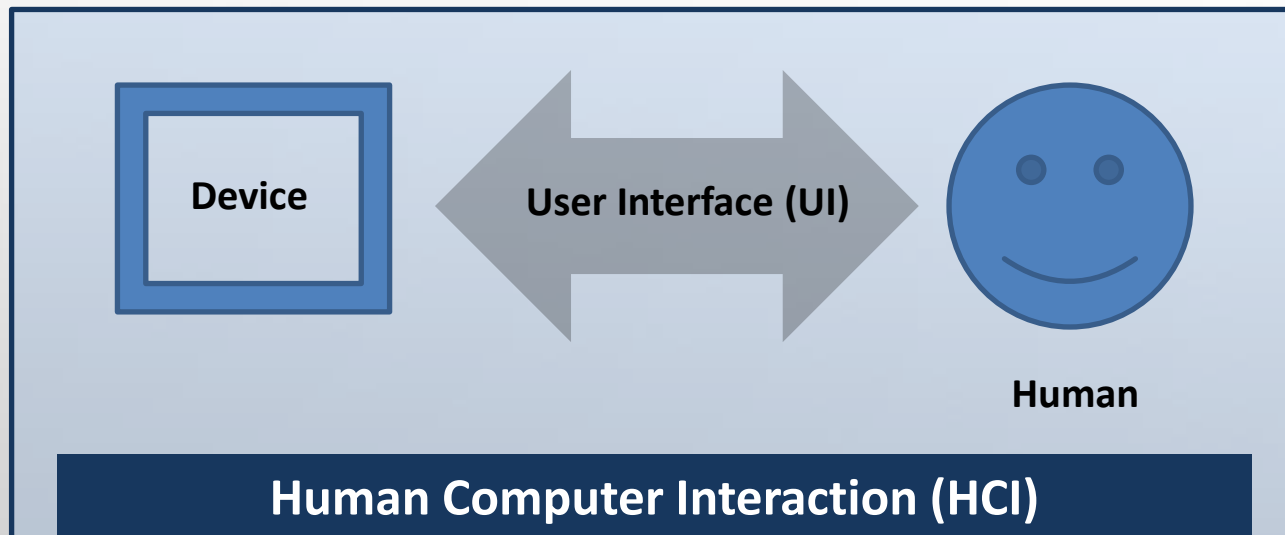
¹⁴ <http://www.facebook.com/>

¹⁵ <http://www.studivz.net/>

Human Computer Interaction (HCI)

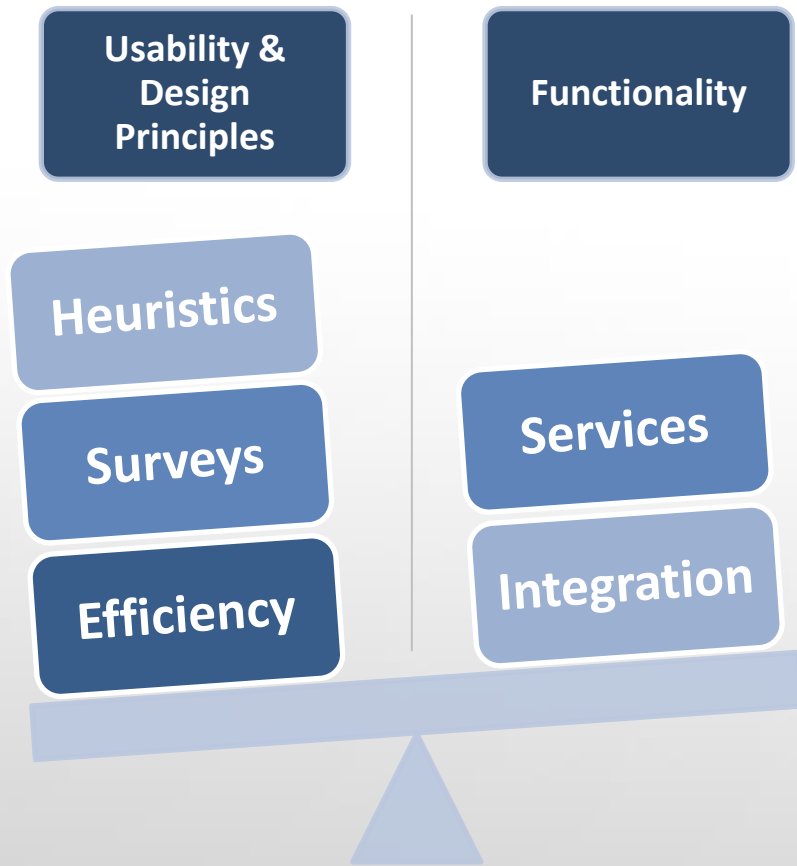
- **Ayob et al. (8 S. 427):**

“Human Computer Interaction (HCI) is concern with investigating the relationship between people and computer systems and applications.”



CHALLENGES

Design vs. Technique



User Interface (UI)



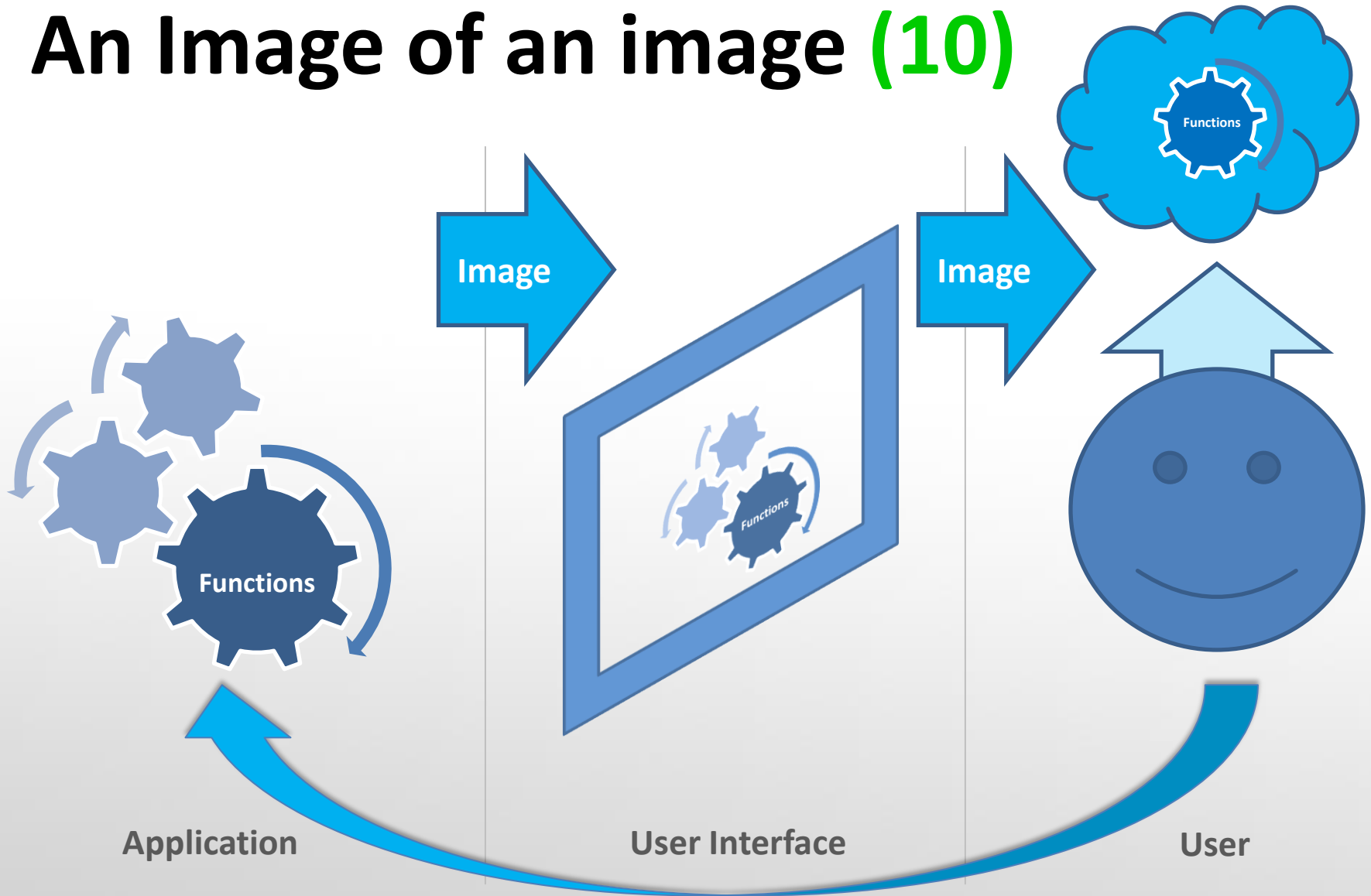
Source: [http://\[...\]/Multi-touch-usability-e2809cstudy-e2809d-with-3-year-old.aspx](http://[...]/Multi-touch-usability-e2809cstudy-e2809d-with-3-year-old.aspx)

User Interface (UI)

- Domagoj Pavlešić (9):

“[...] the most interesting part [...] was in Microsoft Surface Collage [...] I told her to zoom the photo, and she instinctively took two fingers and did the pinch move.”

An Image of an image (10)



`goodUI = (application.equals(image)) ? True : False;`

27

Design Principles

- **After Shneiderman (11 S. 36):**
 - strive for consistency,
 - enable frequent user to use shortcuts,
 - offer information feedback,
 - design dialog to yield closure,
 - offer simple error handling,
 - permit easy reversal of actions,
 - support internal locus of control and
 - reduce short-term memory load

Design Principles

“Design is not just what it looks like and feels like. Design is how it works.”, Steve Jobs, *Apple Inc.*¹⁶ (12)

¹⁶ <http://www.apple.com/>

Usability

- **Lodhi quoting Nielsen (13 S. 259):**

“Usability is a quality attribute that assesses how easy user interfaces are to use. [...] also refers to methods for improving ease-of-use during the design process.”

- **Nielsen’s five quality components of usability (13 S. 259):**
 - *Learnability, Efficiency, Memorability, Errors, Satisfaction*

Usability Testing

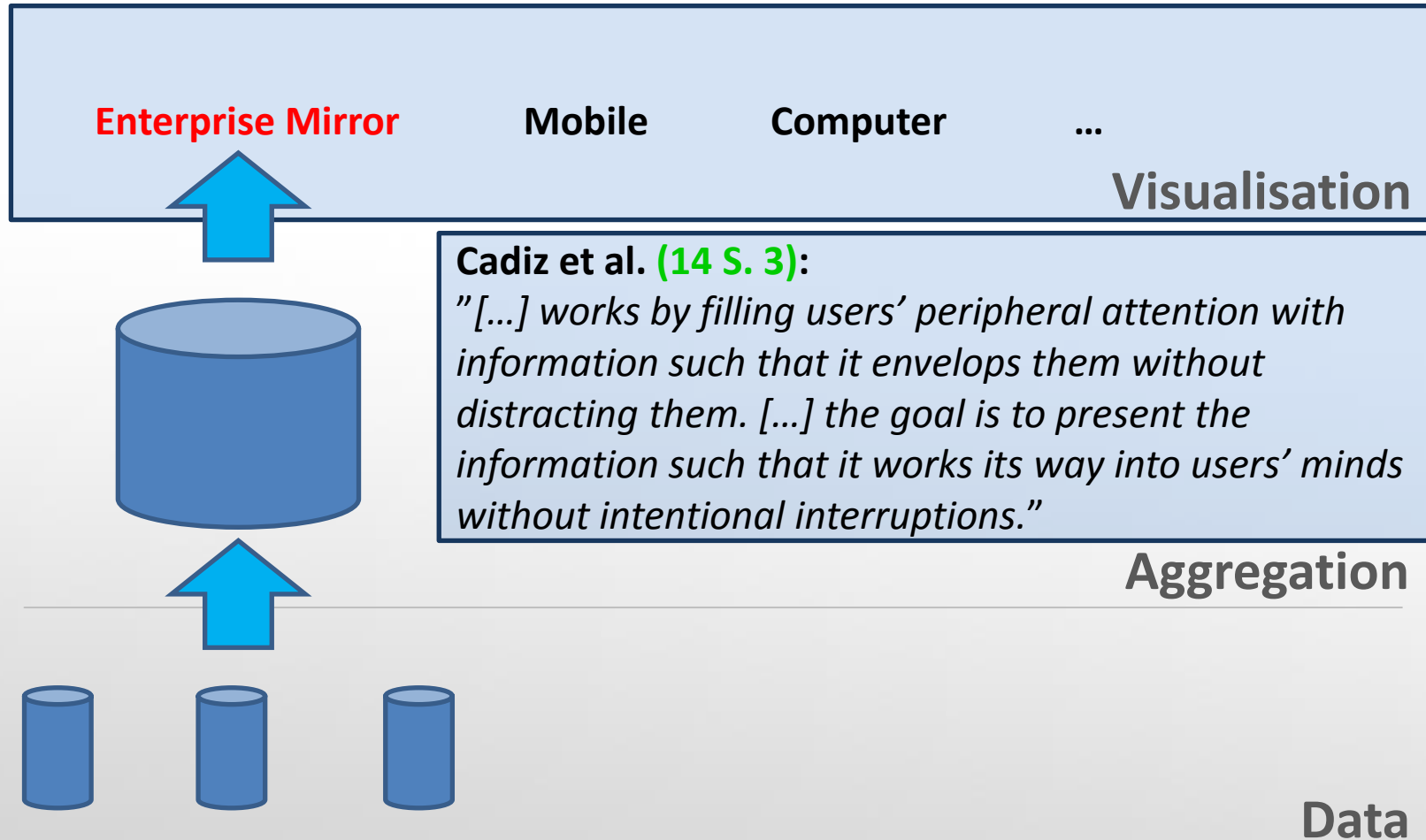
- **Lodhi says (13 S. 256):**

“It is important to perform Usability Assessment [...] So, the cost of maintenance and training of software can be reduced and will definitely increase the Usability of the product.”

- **Some popular methods (13 S. 257):**

- Surveys and Questionnaires
- Observations

Peripheral Awareness



Data

Data integration: Using standards

- ***Really Simple Syndication (RSS)***¹⁹
 - Getting information from blogs, projects, etc.
- ***Lightweight Directory Access Protocol (LDAP)***²⁰
 - Access to dictionary services like the *Microsoft Active Directory*²¹
 - E.g.: „What is the email address from Mr. X?“ or „Of which group or team is Mr. X a member?“

¹⁹ <http://de.wikipedia.org/wiki/RSS>

²⁰ http://de.wikipedia.org/wiki/Lightweight_Directory_Access_Protocol

²¹ http://en.wikipedia.org/wiki/Active_Directory

Roles

Layer 1: All users

People or expert search
(*Matchmaking*,
(15 S. 2))

View company information
(Blogs,
Projects,
Teams, etc.)

Layer 2: Employees

Favorites & Notes

- Blog articles
- Help resources
- Customer contact information

Mini applications

- Mood { 😊, 😞, 😐 }
- (+ optional short message)
- Themes

My projects

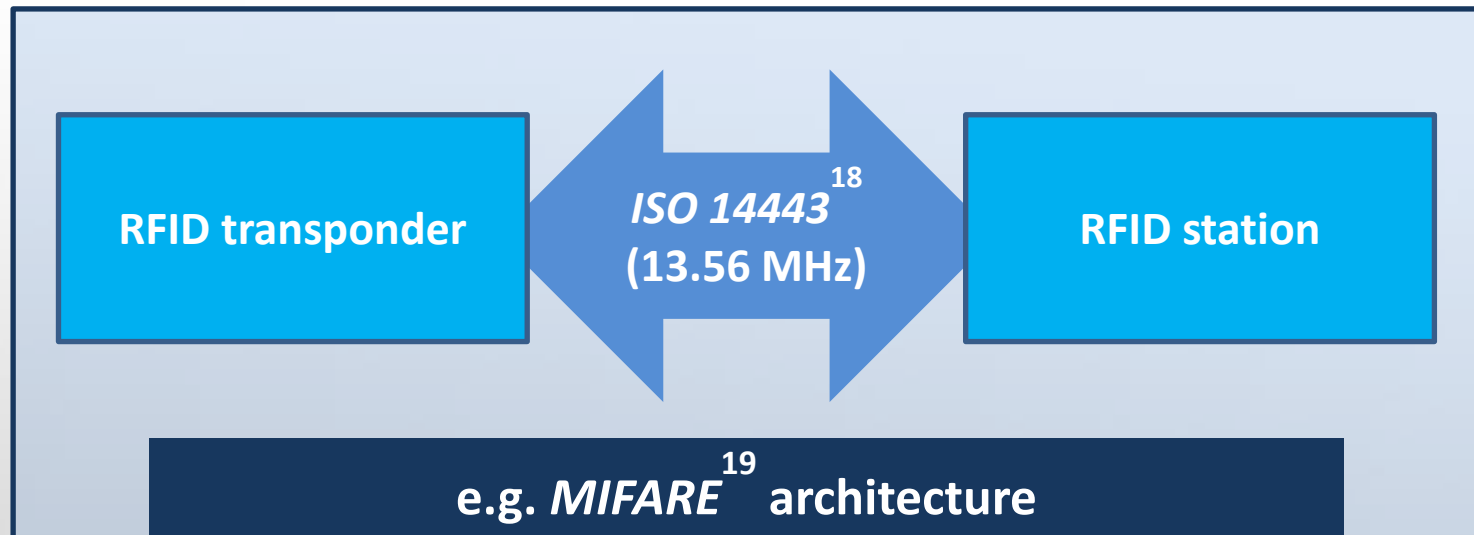
- Overview
- Team members
- Todo lists

Notifications

- Meetings
- Calls
- Appointments

Authentication model

- Preferred method
 - *Radio-frequency identification (RFID)*¹⁷



¹⁷ http://en.wikipedia.org/wiki/Radio-frequency_identification

¹⁸ http://de.wikipedia.org/wiki/ISO/IEC_14443

¹⁹ <http://de.wikipedia.org/wiki/Mifare>

CONCLUSION AND OUTLOOK

CONCLUSION AND OUTLOOK

Conclusion

- **So, what I am going to do?**
 - Developing a multitouch-based social network service (SNS) in terms of an *Enterprise Mirror*
- **The original idea is based on learnings from *Anwendungen 2* und *Projekt 2***
- **I have to consider different issues, like usability, data integration, design principles, etc.**

Outlook

- **First steps**
 - Multitouch-based User Interface
 - Part of the role system (especially Layer 1, see Page 26)
- ***Windows Phone 7*²² development**
 - Support for *Microsoft Silverlight*²³ applications
- **Integration of *Enterprise Microblogging (EMB)* (16)**
 - Short message service for enterprises

²² <http://www.microsoft.com/windowsphone/de-de/default.aspx>

²³ <http://www.microsoft.com/silverlight/>

**THANK YOU FOR
YOUR ATTENTION!**



QUESTIONS

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