Community Driven Development
and Social Networking
Becomes Pervasive

Seminar
“Thesis Outline“
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Agenda

- Placement
- Different Scenarios
- Different Aspects (Ubiquitous Computing, Social Networking, Community Driven Development)
- Architecture / Platform
- Perspective
- Opportunities and Challenges
AW1 – Theme (2nd Master term)
  - Pervasive Gaming (PG)

Project (3rd Master term)
  - Developing a PG-Framework plus Applications

AW2 – Theme (3rd Master term)
  - Clarification: What is CDD?
  - How / Where is CDD used?

Seminar – Theme (3rd Master term)
  - Coming next…
Base Scenario
(Community Messenger)

- Interacting with buddies
- Leaving your position to find you

Basics
- Direct communication service
- Location service
- Server component
Scenario (1)
(Exhibition - Indoor)

- Finding the really interesting events with the help of the visitors
- Describing and rating the exhibiting companies

Basics
- Location service
- Server component
- News service
- Description service
- Rating service
Scenario (2)
(Flirt-Machine - Outdoor)

- Everybody has an own and a search profile
- Checking the position of the flirting people
- If they are close to each other the profiles are getting compared if they match
- Next steps: Creating a direct notification and if both accept the profile a direct connection

Basics
- Direct communication service
- Location service
- Server component
- News service
Scenario (3)
(Reeperbahn - Hybrid)

- Arriving at the Reeperbahn
- Getting the tips of the day (clubs)
- Getting the user recommendations
- Getting the position of your buddies

Basics
- Location service
- Server component
- Description service
- Rating service
## Summary of the Scenarios

<table>
<thead>
<tr>
<th>Different Scenarios</th>
<th>Placement</th>
<th>Exhibition</th>
<th>Flirt-Machine</th>
<th>Reeperbahn</th>
<th>Community Messenger</th>
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<tbody>
<tr>
<td>Indoor / Outdoor</td>
<td>Indoor</td>
<td>Outdoor</td>
<td>Hybrid</td>
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<td>Location- Services</td>
<td>Bluetooth / WLAN / Barcodes</td>
<td>GPS</td>
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<tr>
<td>Communication Service</td>
<td>Nice to Have</td>
<td>Essential (Direct)</td>
<td>Nice to Have</td>
<td>Essential</td>
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<tr>
<td>Description + Rating Service for Locations</td>
<td>Essential</td>
<td>Nice to Have</td>
<td>Essential</td>
<td>Essential</td>
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<tr>
<td>News Service</td>
<td>Essential</td>
<td>Essential</td>
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<tr>
<td>Server Component</td>
<td>Essential</td>
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</tbody>
</table>

→ One Generic Community Messenger for various Scenarios
Ubiquitous Computing

(Definition)

- Many Computers serve each person
- Opposite of virtual reality
- Forces computer to live out here in the world with people
- Difficult integration of human factors, computer science, engineering and social sciences
- “The most profound technologies are those who disappear. They weave themselves into fabric of everyday life until they are indistinguishable from it.” (Mark Weiser)
- All scenarios are realizable with a mobile device
- This device could be a mobile phone, smartphone or PDA
- Important is the natural use of these devices, because they are already integrated into everyday life
One aspect of Web 2.0

Tools that allow people to come together

It consists of nodes and links which represents participants and their friendships

Different forms of social software:
  - Instant Massaging, online role-playing games, collaborative editing tools, …
Social Networking
(in context of my scenario)

- Up to now in most cases social networking happened just in front of a desktop pc
- Bridging to the real life – now user can use this network wherever they are and whenever they want
The community creates the content for itself

Know How
- From wizards for wizards (Linux, Mozilla)
- From wizards for everybody (Wikipedia)
- From everybody for everybody (Second Life)

User Interface
- Wizards
- Programmers
- Authors
Every user has the possibility to create content wherever he is and whenever he wants.

Different kinds of content
- Describing locations
- Rating locations

Important aspects
- License of the content
- Copyright
- Administration
Architecture
(Android)

Placement
Different Scenarios
Different Aspects:
- Ubi Comp
- Social Networking
- CDD

Architecture / Platform
Perspective
Opportunities and Challenges

CDD and Social Networking Becomes Pervasive - Andreas Herglotz
Architecture (Client – Exhibition)

CDD and Social Networking Becomes Pervasive - Andreas Herglotz
Architecture
(Client – Flirt-Machine)

CDD and Social Networking Becomes Pervasive - Andreas Herglotz

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CDD and Social Networking Becomes Pervasive - Andreas Herglotz
• Location Manager
  • Uses the location service which is available to find friends or buildings

• XMPP
  • Sends device to device - data to other users

• Notification Manager
  • Tells the user that something in the background has happened

• SQLite
  • Small Database for the mobile device

• Activity Manager
  • Manages the lifecycle of the applications
Neutron
(Platform – Server)

Neutron® Core Platform provides all basic functionalities needed to develop multiplayer games. For specific purposes Neutron® Add-Ons enhance the core functionality. They are seamlessly integrated and can be individually combined with the Core Platform.

Add-Ons
- Tournaments
- For Prizes
- Items & Assets
- Game Server
- Marketing Campaigns
- Server AI
- Trivia
- Core Platform
- Community
- Communication
- Administration
- Mobile SDKs
- Online SDKs (PC, Web, Wii, PS3)
- Neutron Server SDK

Different Scenarios
- Ubi Comp
- Social Networking
- CDD

Different Aspects:
- Ubi Comp
- Social Networking
- CDD

Architecture / Platform
Perspective
Opportunities and Challenges

CDD and Social Networking Becomes Pervasive - Andreas Herglotz
Perspective

- My Vision: One Messenger
  - Usable anytime and anyplace – a natural unobtrusive mobile phone (Pervasive)
  - Creating content whenever you want and wherever you are (Community Driven Development)
  - Making the step from the virtual community to the real life (Social Networking)
  - Using a completely new platform (Android)

- Android Developer Challenge
Opportunities and Challenges

**Opportunities**
- Creating something completely new
  - Transport CDD in a pervasive context
  - Bridge from virtual social networking to real life social networking
  - Using a new platform (Android)

**Challenges**
- Creating something completely new
- Using an SDK in a non-final version
- Using an emulator – because the hardware still does not exist
References

- Exit Games; Mobile Social Software – Applications that Drive Social Networking and Maximize Your Revenues (May 2006)
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- Mark Weiser; The Computer for the Twenty-First Century; Scientific American pp.94-100 (September 1991)
- Howard Stearns, Joshua Gargus, et al.; Simplified Distributed Authoring Via Component-based Object Construction and Deconstruction in Collaborative Croquet Spaces; (05.2006) – IEEE
- Michele Tapper; The Rise of Social Software (September 2003) - ACM
Thanks – Any Questions?