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

Placement

Different Scenarios

Different Aspects:
 - Ubi Comp
 - Social Networking
 - CDD

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)

Placement

Different Scenarios

Different Aspects:
 - Ubi Comp
 - Social Networking
 - CDD

Architecture / Platform

Perspective

Opportunities and Challenges

- Interacting with buddies

- Leaving your position to find you

- Basics

  - Direct communication service

  - Location service

  - Server component

Scenario (1)
(Exhibition - Indoor)

Placement

**Different
Scenarios**

Different Aspects:
- Ubi Comp
- Social Networking
- CDD

Architecture /
Platform

Perspective

Opportunities and
Challenges

- 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

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Placement

Different Scenarios

Different Aspects:
- Ubi Comp
- Social Networking
- CDD

Architecture / Platform

Perspective

Opportunities and Challenges

- 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

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Placement

**Different
Scenarios**

Different Aspects:
 - Ubi Comp
 - Social Networking
 - CDD

Architecture /
Platform

Perspective

Opportunities and
Challenges

- 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

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Placement

Different Scenarios

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Architecture / Platform

Perspective

Opportunities and Challenges

	Exhibition	Flirt-Machine	Reeperbahn	**Community Messenger**
Indoor / Outdoor	Indoor	Outdoor	Hybrid	**Hybrid**
Location-Services	Bluetooth / WLAN / Barcodes	GPS	GPS / WLAN / Bluetooth / Barcodes	**GPS / WLAN / Bluetooth / Barcodes**
Communication Service	Nice to Have	Essential (Direct)	Nice to Have	**Essential**
Description + Rating Service for Locations	Essential	Nice to Have	Essential	**Essential**
News Service	Essential	Essential	Essential	**Essential**
Server Component	Essential	Essential	Essential	**Essential**

→ 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)

Ubiquitous Computing
(in context of my scenario)

Placement

Different Scenarios

Different Aspects:

- Ubi Comp
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- CDD

Architecture / Platform

Perspective

Opportunities and Challenges

- All scenarios are realizable with a mobile device

- This device could be a mobile phone, smart phone or PDA

- Important is the natural use of these devices, because they are already integrated into everyday life

Social Networking
(Definition)

- 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, …

Placement

Different Scenarios

Different Aspects:
 - Ubi Comp
 **- Social
   Networking**
 - CDD

Architecture /
Platform

Perspective

Opportunities and
Challenges

- 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

CDD - Content
(Definition)

- 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

CDD - Content
(in context of my scenario)

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Placement

Different Scenarios

Different Aspects:
 - Ubi Comp
 - Social Networking
 - CDD

Architecture /
Platform

Perspective

Opportunities and
Challenges

- Every user has the possibility to create content wherever he is and whenever he want

- Different kinds of content

  - Describing locations

  - Rating locations

- Important aspects

  - License of the content

  - Copyright

  - Administration

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Placement

Different Scenarios

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**Architecture /
Platform**

Perspective

Opportunities and
Challenges

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Architecture
(Client – **Exhibition**)

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Placement

Different Scenarios

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**Architecture /
Platform**

Perspective

Opportunities and
Challenges

Architecture
(Client – **Flirt-Machine**)

Placement

Different Scenarios

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**Architecture /
Platform**

Perspective

Opportunities and
Challenges

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Placement

Different Scenarios

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**Architecture /
Platform**

Perspective

Opportunities and
Challenges

Architecture
(Client – **Community Messenger**)

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Placement

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**Architecture /
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- **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)

Placement

Different Scenarios

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 - CDD

**Architecture /
Platform**

Perspective

Opportunities and
Challenges

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
- Different Tournament Types (Single- and Multiplayer)
- Flexible (Server Side) Rules
- Management Interface

For Prizes
- Interface to E-Prize Solution Provider
- Prize Redemption
- Prize Management

Items & Assets
- Content Management
- Multiple Languages and Currencies Supported
- Flexible Billing

Game Server
- Custom Server-Side Development Framework
- Integration of External Services (SOA)

Marketing Campaigns
- Campaign Solutions Interface (e.g. Lyris)
- Integrated Content Management System

Server AI
- Virtual Master
- Virtual Player
- Persistent Worlds

Trivia
- Server-Side Trivia Master
- Content Updates
- Trivia Specific Statistics

Community
- Building and Managing Custom Community Sites

Core Platform

Game Play
Multiplayer: Real-Time, Turn-Based
Singleplayer
High Scores, Ghost Racing
Asset Downloads

Community
Game Lobby
Skill-based Matchmaking
Buddy Lists with Presence
Gamer Identities
Leaderboards

Administration
Control Center
Items & Assets Management
User Management
Usage Statistics

Communication
Privat & Public Chat
Rooms
SMS
Tell-a-friend
Multicast Messages

Connectors
Distribution Systems
Billing Systems
Community Systems
IMS/SIP Systems

Mobile SDKs
Online SDKs (PC, Web, Wii, PS3)
Neutron Server SDK

Distribution Systems
Carriers & Portals
White-listed & Carrier Tested

Billing Systems
Event & Subscription Billing
Direct Carrier & 3rd Party Billing

Community Systems
Integrated Lobby Systems
IMS/SIP Systems

Marketing Systems
In-game Advertising
Marketing Campaigns

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- **My Vision: One Messenger**
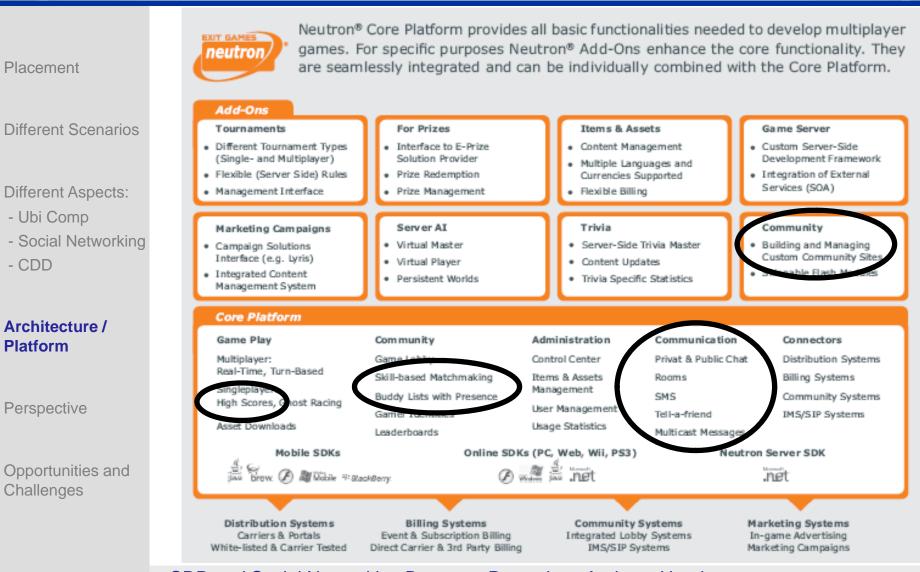
  - Usable anytime and anyplace –

    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

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Architecture /
Platform

Perspective

**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

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Thanks – Any Questions?