

Community Driven Development and Social Networking Becomes Pervasive

Seminar "Thesis Outline" Andreas Herglotz 18.01.2008



Agenda



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- Placement
- Different Scenarios
- Different Aspects (Ubiquitous Computing, Social Networking, Community Driven Development)
- Architecture / Platform
- Perspective
- Opportunities and Challenges



Placement (Master Context)



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Placement

Different Scenarios

Different Aspects:

- Ubi Comp
- Social Networking
- CDD

Architecture / Platform

Perspective

- 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)



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Placement

Different Scenarios

Different Aspects:

- Ubi Comp
- Social Networking
- CDD

Architecture / Platform

Perspective

- Interacting with buddies
- Leaving your position to find you
- Basics
 - Direct communication service
 - Location service
 - Server component



Scenario (1) (Exhibition - Indoor)



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Placement

Different Scenarios

Different Aspects:

- Ubi Comp
- Social Networking
- CDD

Architecture / Platform

Perspective

- 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)



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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



Scenario (3) (Reeperbahn - Hybrid)



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Placement

Different Scenarios

Different Aspects:

- Ubi Comp
- Social Networking
- CDD

Architecture / Platform

Perspective

- 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



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Different Scenarios

Different Aspects:

- Ubi Comp
- Social Networking
- CDD

Architecture / Platform

Perspective

Opportunities and Challenges

		Exhibition	Flirt-Machine	Reeperbahn	Community Messenger
g	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)



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Placement

Different Scenarios

Different Aspects:

- Ubi Comp
- Social Networking
- CDD

Architecture / Platform

Perspective

- 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





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Placement

Different Scenarios

Different Aspects:

- Ubi Comp
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- CDD

Architecture / Platform

Perspective

- 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)



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Placement

Different Scenarios

Different Aspects:

- Ubi Comp
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- CDD

Architecture / Platform

Perspective

- 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)



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Placement

Different Scenarios

Different Aspects:

- Ubi Comp
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- CDD

Architecture / Platform

Perspective

- 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



CCD - Content (Definition)



Placement

Different Scenarios

Different Aspects:

- Ubi Comp
- Social Networking
- CDD

Architecture / Platform

Perspective

Opportunities and Challenges

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



CCD - Content

(in context of my scenario)



Placement

Different Scenarios

Different Aspects:

- Ubi Comp
- Social Networking
- CDD

Architecture / Platform

Perspective

- 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



Architecture (Android)



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Placement

Different Scenarios

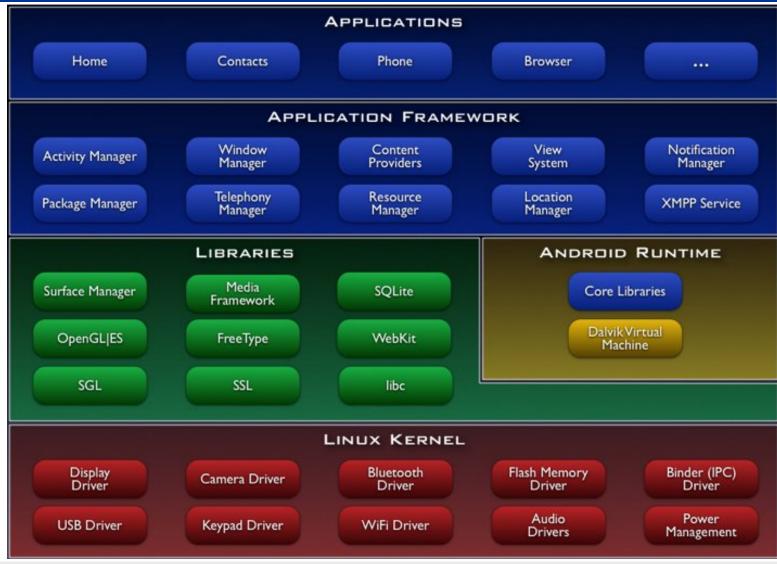
Different Aspects:

- Ubi Comp
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- CDD

Architecture / Platform

Perspective

Opportunities and Challenges



CDD and Social Networking Becomes Pervasive - Andreas Herglotz



Architecture (Client – Exhibition)



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Placement

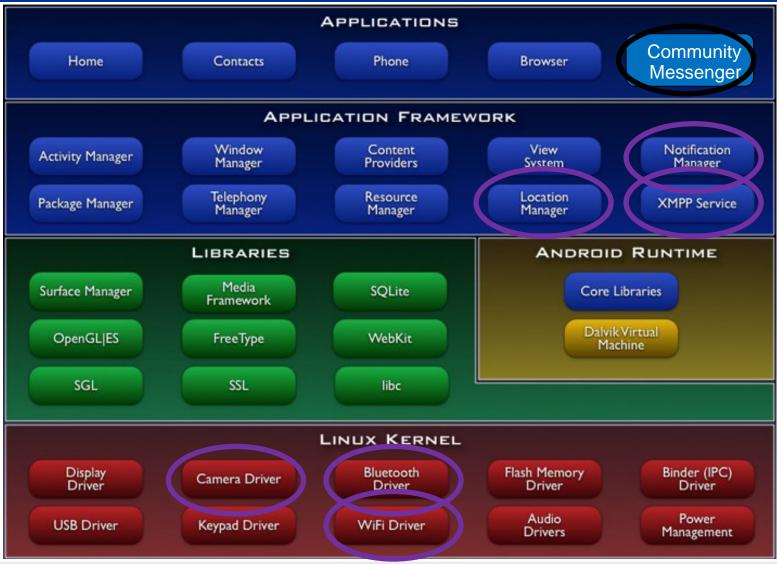
Different Scenarios

Different Aspects:

- Ubi Comp
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Architecture / Platform

Perspective





Architecture



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(Client - Flirt-Machine)

Placement

Different Scenarios

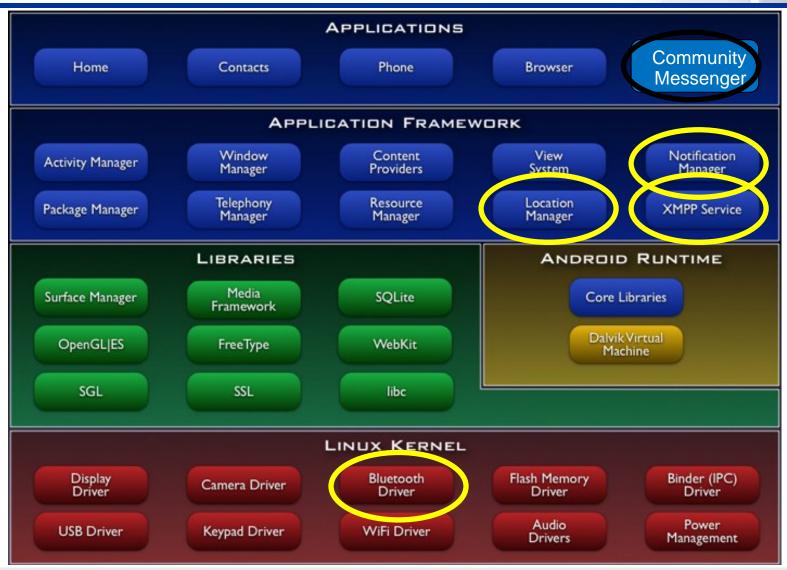
Different Aspects:

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Architecture / Platform

Perspective

Opportunities and Challenges



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Architecture (Client – Reeperbahn)



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Placement

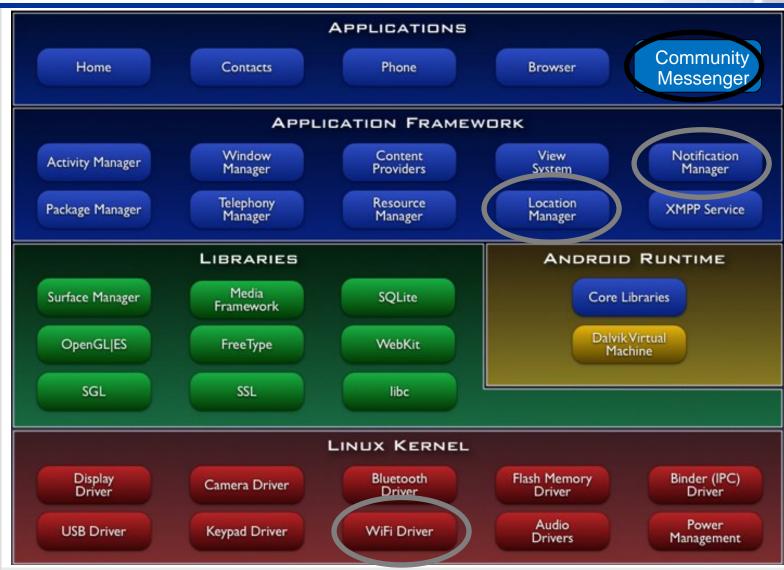
Different Scenarios

Different Aspects:

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Architecture / Platform

Perspective





Architecture



(Client – Community Messenger)

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Placement

Different Scenarios

Different Aspects:

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Architecture / Platform

Perspective





Android (Platform – Client)



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Placement

Different Scenarios

Different Aspects:

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Architecture / Platform

Perspective

Opportunities and Challenges

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)



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Placement

Different Scenarios

Different Aspects:

- Ubi Comp
- Social Networking
- 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 Site

Core Platform

Game Play

Multiplayer: Real-Time, Turn-Based

High Scores, ost Racing

Asset Downloads

Com munity

Skill-based Matchmaking

Buddy Lists with Presence

Leaderboards

Administration

Control Center

Items & Assets Management

User Management Usage Statistics

communication

Privat & Public Chat

Rooms

SMS

Tell-a-friend

Multicast Message

Connectors

Distribution Systems Billing Systems

Community Systems

IMS/SIP Systems

Neutron Server SDK

net

Mobile SDKs





Carriers & Portals



Online SDKs (PC, Web, Wii, PS3)

Distribution Systems 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

White-listed & Carrier Tested CDD and Social Networking Becomes Pervasive - Andreas Herglotz



Perspective



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Architecture / Platform

Perspective

Opportunities and Challenges

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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Placement

Different Scenarios

Different Aspects:

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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



References



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Thanks – Any Questions?