

# Project

Distributed Systems Lecture  
HS 2011, ETH Zurich

Simon Mayer

[simon.mayer@inf.ethz.ch](mailto:simon.mayer@inf.ethz.ch)



# Assignment 1: Sensing and Anti-Theft

- Grades have finally arrived :-)
  - Check submission system for grades and comments in your report pdfs
- Reports
  - Pretty good...
  - In general: More **technical/implementation** description, less narrative
  - Abstracts: No introductions, but content summaries!
    - Ideally: After reading the abstract, we know **what** your application does, **how** it does that (in general, e.g., which sensors you used), and what **enhancements** you implemented
- **Save points: If correction doesn't say anything, you've got it...**

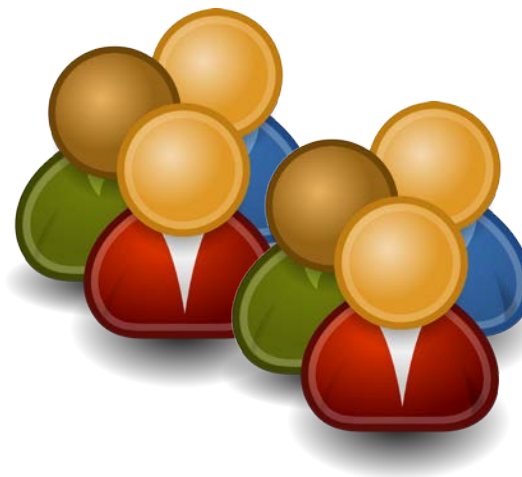
# Project

- Find a **partner group**  
i.e. form teams of 4-6 persons
- Choose your own topic (examples following)
  - Only limitation: Must contain a **distributed component**
  - How about a ubiquitous application? Like combining real-time, real-world information (e.g. the phone's sensors or weather/traffic/... info) with context awareness (e.g. location) to support the user in doing X?
- Submission due **19 Dec 2011**
  - 5–10 minutes presentation
  - Submit code, slides, and report (one per team)



# Registering your Team

- Via the submission system...
- Create new team composed of members of the merged groups (therefore max. 6 people)
- Submit & be happy, as for the other assignments



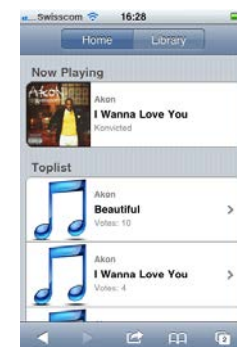
# EXAMPLES

Selected projects from the previous years

# djCrowd – Interactive distributed music player

HS10: Luchin Doblies, Alexander Grest, Moritz Hoffmann, Jost Joller, Philipp Schmid, David Stolz

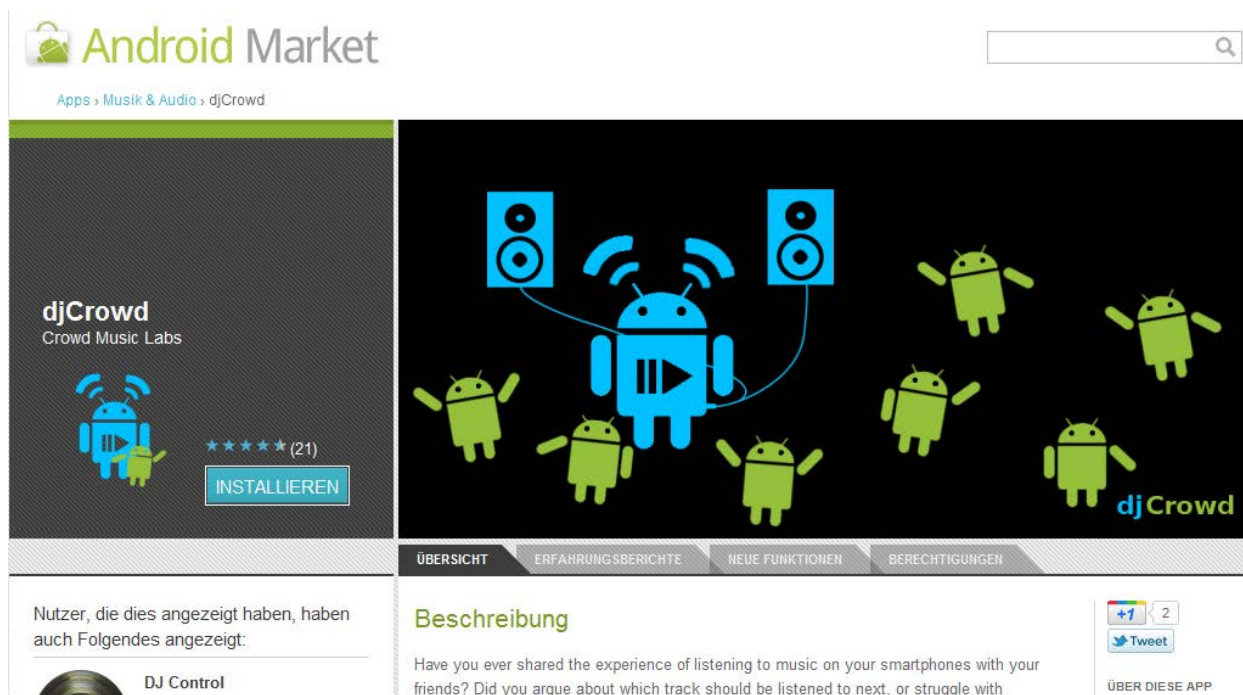
- Start up one phone as server (connected to hi-fi system)
- All your friends can connect to server
  - See song that is currently playing
  - See upcoming songs in the playlist
  - Modify playlist by voting for the music they like
  - Upload songs from their phones



+ Web interface to provide access for non-Android devices

# djCrowd – Interactive distributed music player

HS10: Luchin Doblies, Alexander Grest, Moritz Hoffmann, Jost Joller, Philipp Schmid, David Stolz



1000-5000 downloads on Android Market, rated 4,6 Stars

# DroidPresenter – Remote controlling presentations

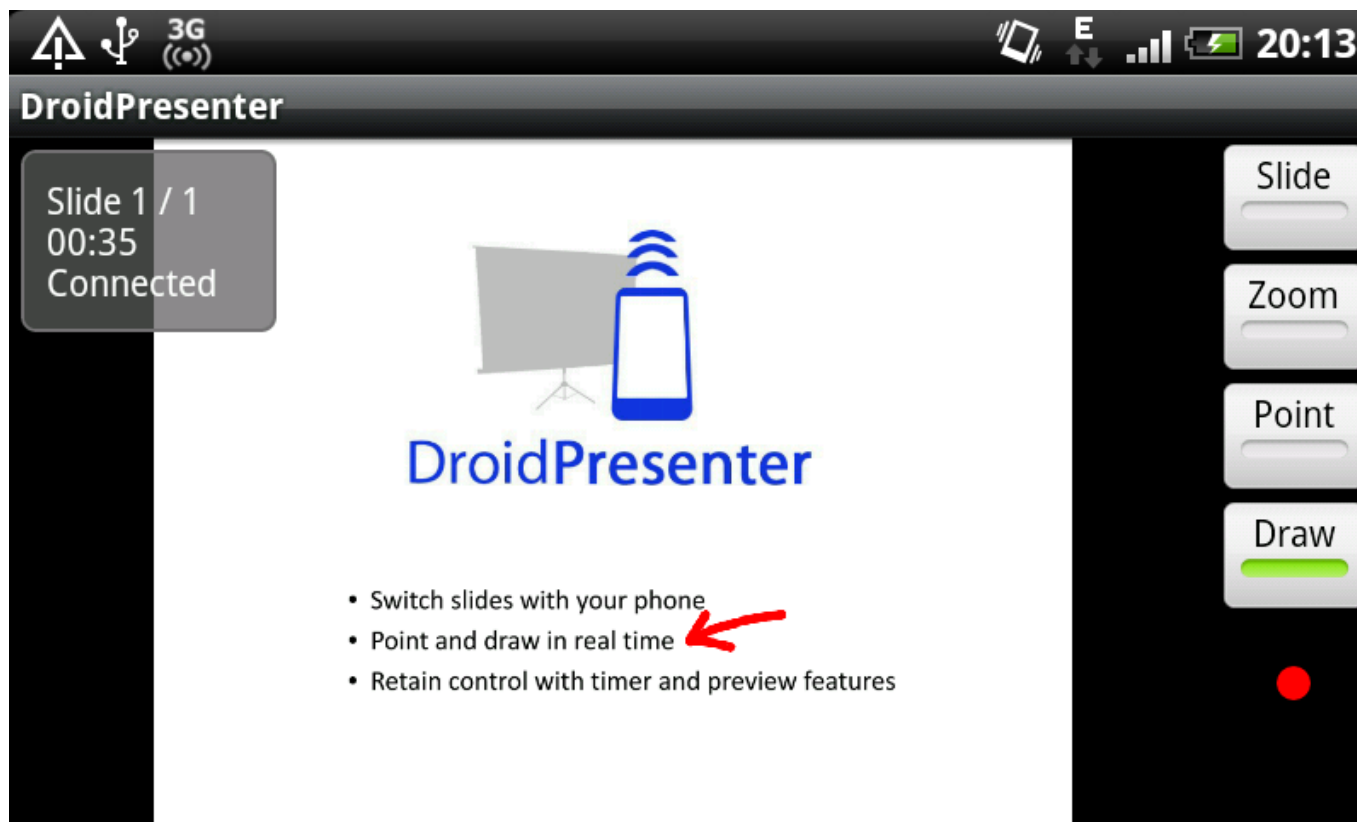
HS10: Andreas Tschofen, Leonhard Helminger, Mathias Bürki, Damian Karrer

- Wirelessly connect to your phone and open the presentation – slides sent to phone
  - Switch slides while you are freely moving through the room
  - Use your finger as a pointer and pen to draw on the slides
  - Displayed slide can be freely panned and zoomed on the phone
  - Slide preview + timer: Stay in full control of your presentation



# DroidPresenter – Remote controlling presentations

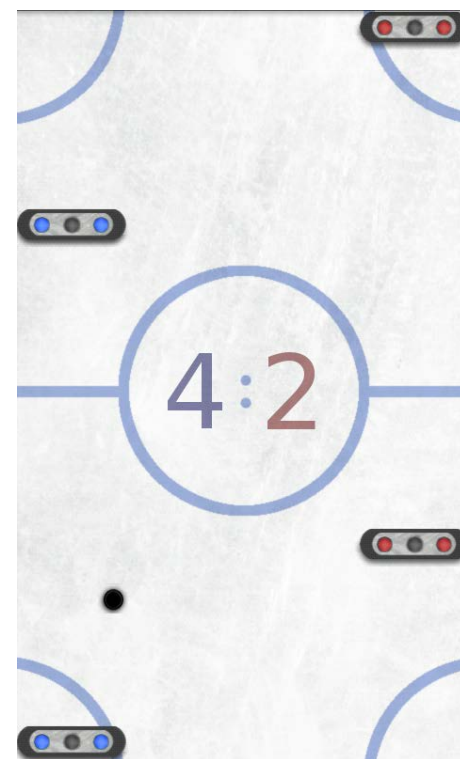
HS10: Andreas Tschofen, Leonhard Helminger, Mathias Bürki, Damian Karrer



# Table Pong Bluetooth – Pong meets tabletop soccer

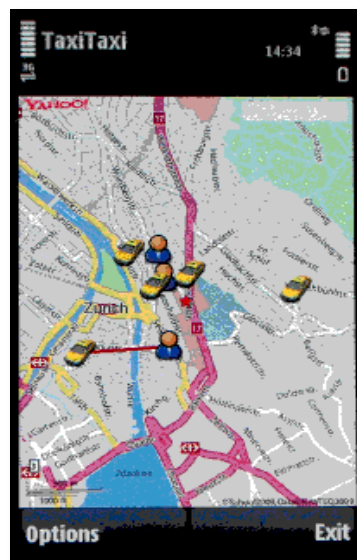
HS10: Yannick Stucki, Adrian Blumer, Fabian Gremper, Pascal Studerus, Lukas Manser

- Game principle taken from Pong
- Multiplayer part inspired by tabletop soccer
  - Each side has two paddles in any match up
  - Single- and Multiplayer modes:
    - Control both paddles in singleplayer mode
    - Play anything from 1on1 to 1on2 and 2on2



# Consensus-based Taxi

- Implementation for the consensus problem
- Distributed application to find the optimal cab



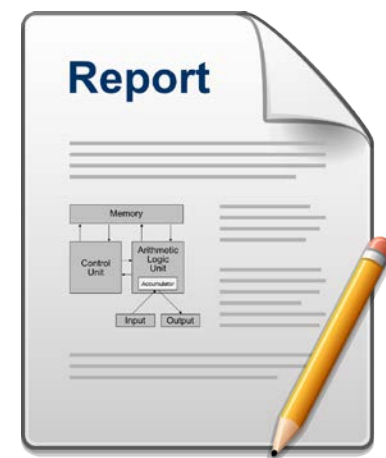
## Real-world «Pokemon» Game

- Discover animals around Zurich / Switzerland
- Let them fight against other players' creatures
- GPS- and probability-based
- Backend server with database
- Unfortunately only text-based 😊

# SUBMISSION AND PRESENTATION

# Project Report

- Only one report per team
- Focus on technical description of your work
  - General idea
  - Requirements
  - Architecture
  - Implementation
  - Usage



# Project Presentation

- Prepare slides for 5–10 minute presentation
- Focus on selling your idea
  - Motivation
  - General idea
  - How you realized it
  - Results
- Presentations & Demos will take place on **19 Dec 2011**
  - If we don't make it, this will continue on **23rd** (that's when the solutions to the theoretical exercises will be discussed...)







# Assignment 2 – Feedback & Study

- Study on REST and WS-
  - [https://docs.google.com/spreadsheet/viewform?hl=en\\_US&pli=1&formkey=dFFsbS1OVUVSaV9ld1dUYjZ1N0Jsdmc6MA#gid=0](https://docs.google.com/spreadsheet/viewform?hl=en_US&pli=1&formkey=dFFsbS1OVUVSaV9ld1dUYjZ1N0Jsdmc6MA#gid=0)
  - Perceived easiness/speed of learning of technologies
  - Feedback: Previous knowledge, time spent for assignment
- Anonymous & individual