

Department of Computer Science Institute for System Architecture, Chair for Computer Networks

# Application Development for Mobile and Ubiquitous Computing

# Mobile event planer: Frizz First Presentation

Group No: 3 Team: Sascha Huth, Gerd Bombach



- Mobile event planer for the magazine Frizz
- Get an overview about the next events in your city:
  - What can I do this evening?
  - What great events just happen now near my current location?
- Users should get a fast and simple to use event planner with the latest information in their pocket



# **Application Scenario**





# Features

 Choose a city where events information is available





# Features

- Get a list with events
- Filter the list:
  - Events with different categories
  - Time and date







 Get detailed information about a specific event

- Date
- Start time
- Location
- Description text





# Features



- Show all available events from your event list on a Google Map together with your current location
- Click on an event to get more information about it.









- Android Platform 2.0+ (API Level 5+)
- Android App Development using MVC pattern:
  - *Model:* Defined by resource files
  - View: User interface, defined by XML files
  - *Controller:* Extensions of "activities" (ListActivity, TabActivity, ...)
- Client/server architecture:
  - Android client shows GUI, enables interaction
  - External server ("black box" so far) provides booking logic, user management, database



Architecture





# Limited bandwidth

- Cause as little traffic as possible
- Partition data and requests (avoid downloading all at once)
- Outsource processing to server-side ("cloud")
- Build cache, maybe pre-fetch data

#### Usability

- Use *conventional* UI elements and patterns (tab view, list view, input boxes)
- Provide *unconventional* input methods where appropriate (e. g. slide between cars, pinch-to-zoom in map view)



# Adapt to device specifications

- Provide LDPI, MDPI, HDPI resources
- Optimize portrait and landscape view

#### Benefit from smartphone features

- Use location-based search if possible
- List directions and distances to nearest car stations
- Shortcut to directly call support

# Security

• Question of persistence regarding user credentials



# 1<sup>st</sup> task (starting now):

- Look for available interfaces and technologies
- Familiarize with the Google Android SDK
- Analyse the task in detail

# 2<sup>nd</sup> task (done until begin of December):

 Create a first prototype including all required UI views and layouts

# 3rd task (end of the term)

- Finalize the application
- Testing
- Make lots of money ;-)