

# Application Development for Mobile and Ubiquitous Computing

TUD-Scheduler

Adaptation Concept Presentation

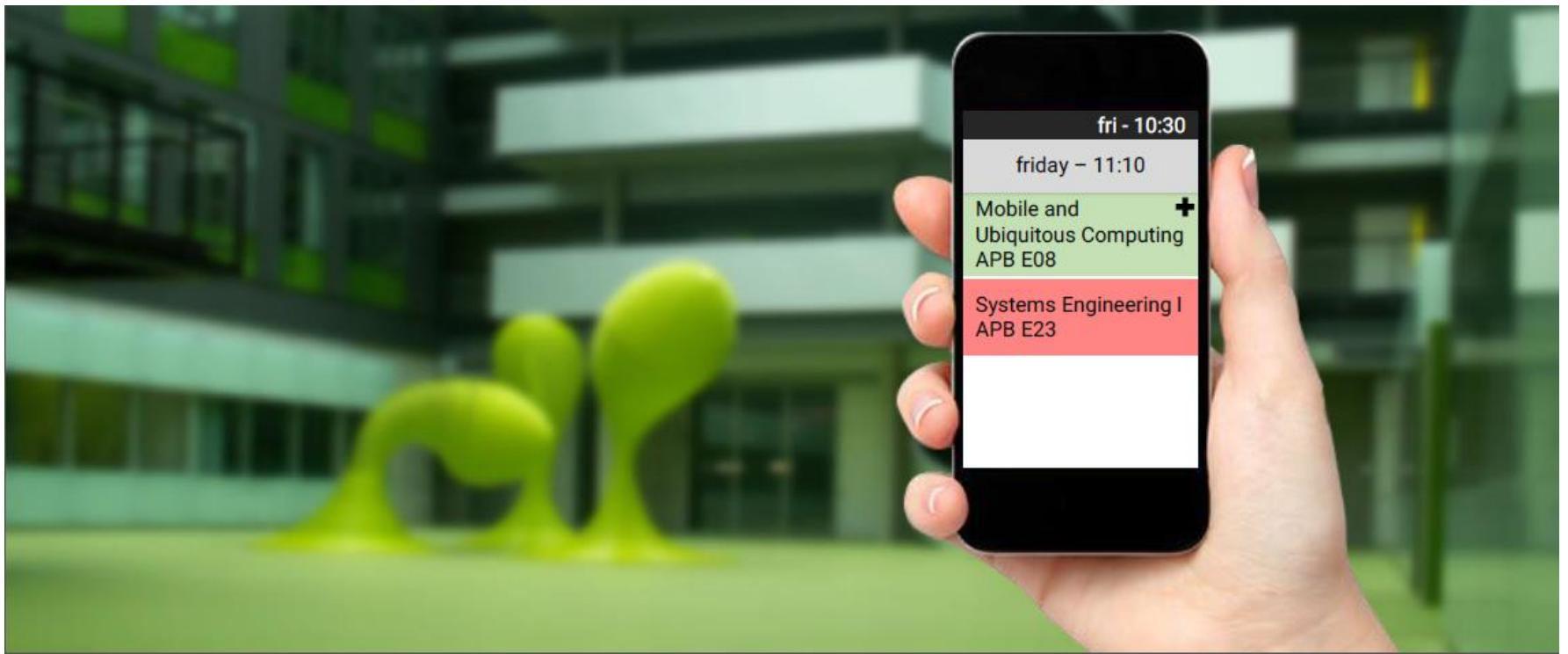
Dag Dammann & Marc Kandler, Group Nr. 15

Dresden, 18.12.2015



DRESDEN  
concept  
Exzellenz aus  
Wissenschaft  
und Kultur

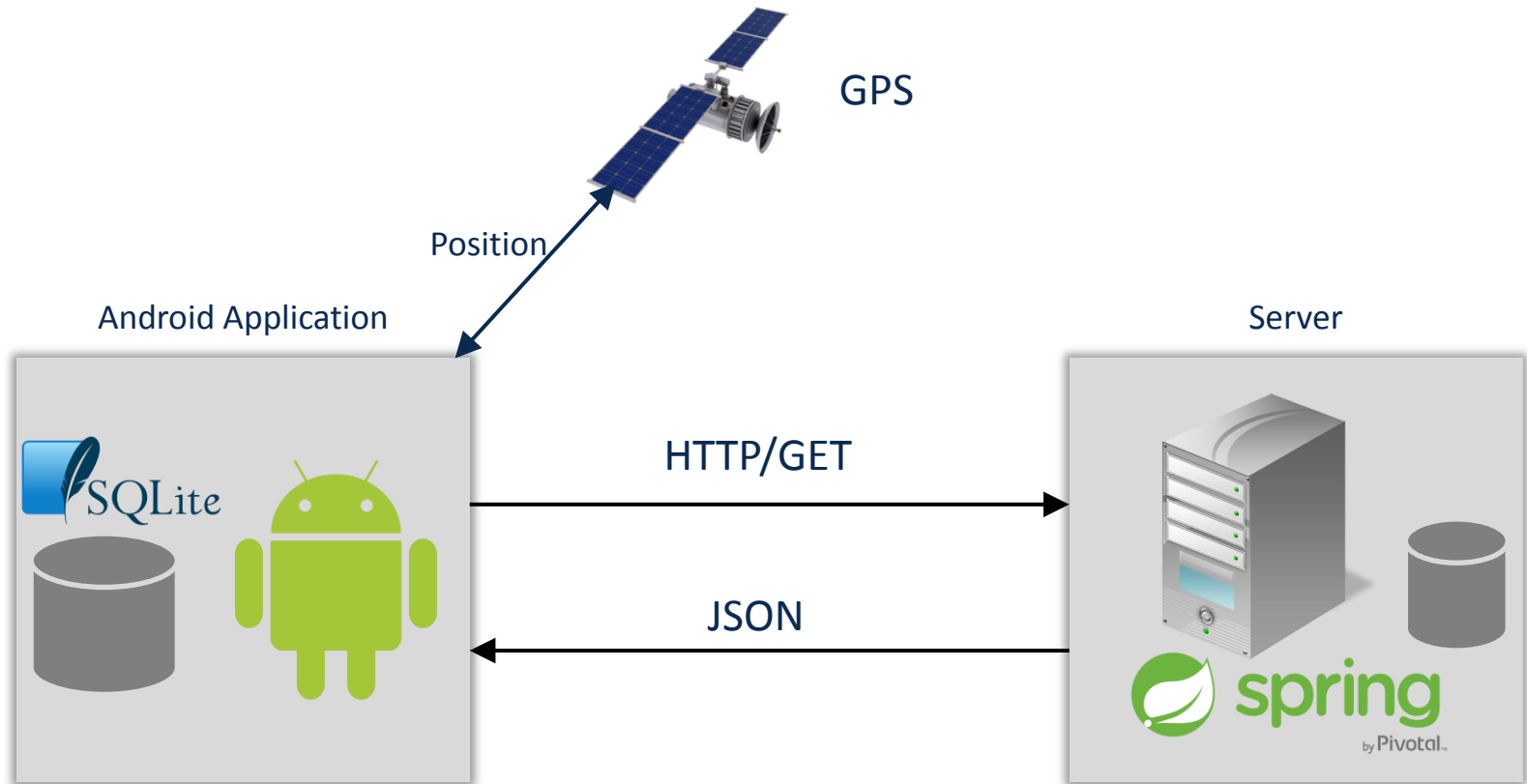
# Application Scenario



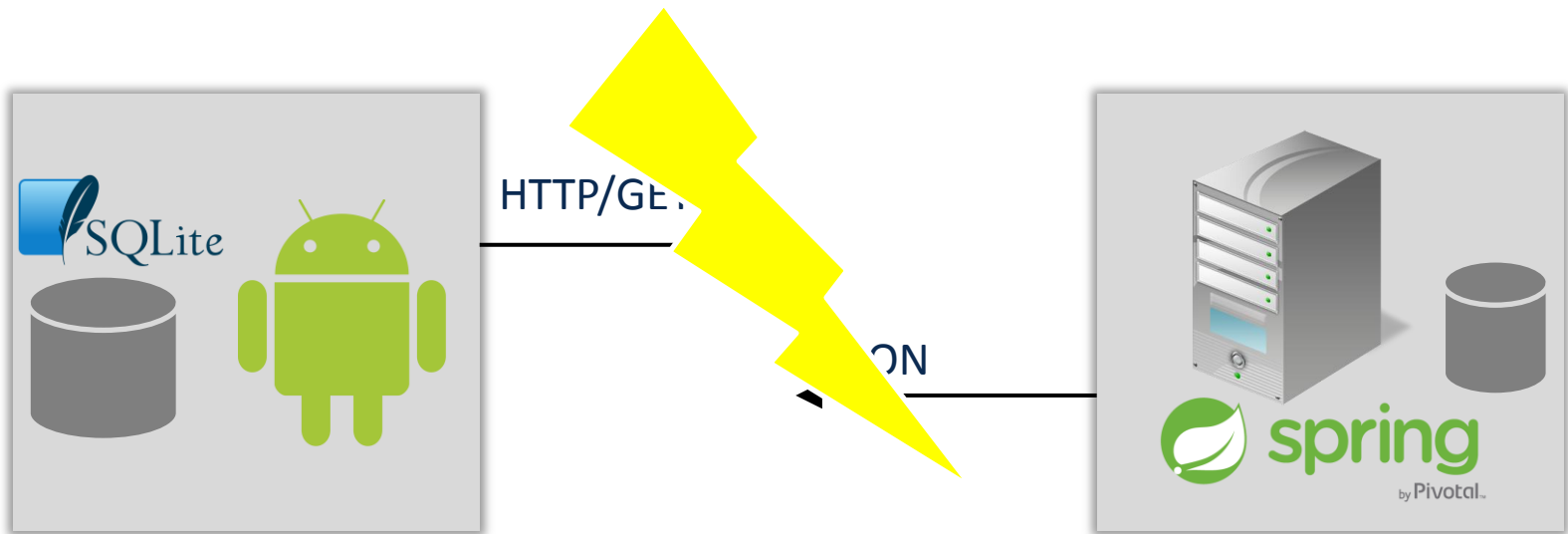
## Application Scenario

- User provides his Course of Study and current Semester
- Fetch overall schedule from Server
- Build schedule with the offered course data
- Automatic conflict detection
- Location- & time based presentation of future events (courses)
- Mark modules as finished
  - Course presentation of future semesters changes accordingly
  - Track results in module history

# Architecture and Technologies

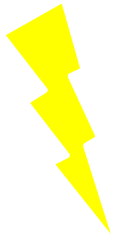


## Challenges – Offline Challenge



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- Check for active network connection
- Contact to server on startup or per choice
- Comparison between schedule timestamps
- Update if necessary



- Fallback on local data and warning (data might not be up to date)
- Last known location is used in case of failure

## Challenges – Usability Challenge

- Fetching of schedule according to course of study and current semester
- Personalized schedule with support for conflict resolution



# Adaptation and Context

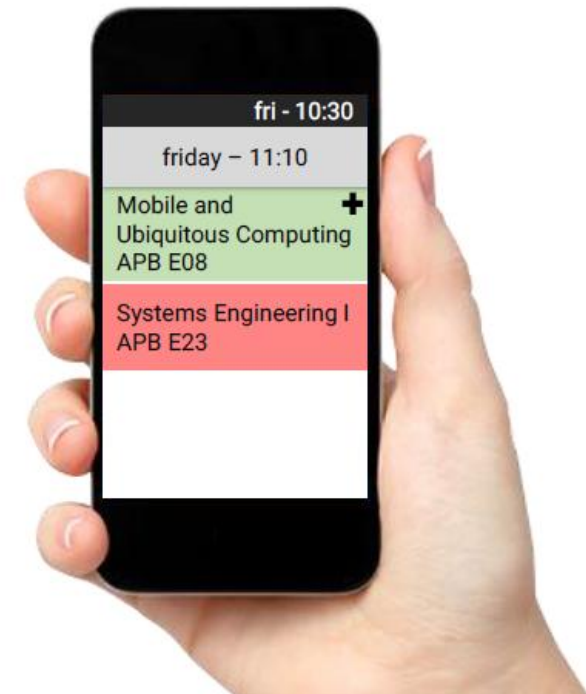
time



location



input data





# Adaptation and Context

time



-Retrieve current time and compare with schedule time

location



- Retrieve current location via GPS
- Compare coordinates with those of TUD-buildings?
- Change schedule according to distance

input data



-Schedule changes according to made choices

## Current State

- Basic User Interface Design
- Fetch JSON from Server according to user input
- Display unrefined schedule
- Collapse schedule according to selected courses

## Open Tasks

- Finish scheduling functionality
- Implement a tracking mechanism for course completion
- Use Location-Context to show different schedule
- Testing and final UI design

Thanks for your attention!