



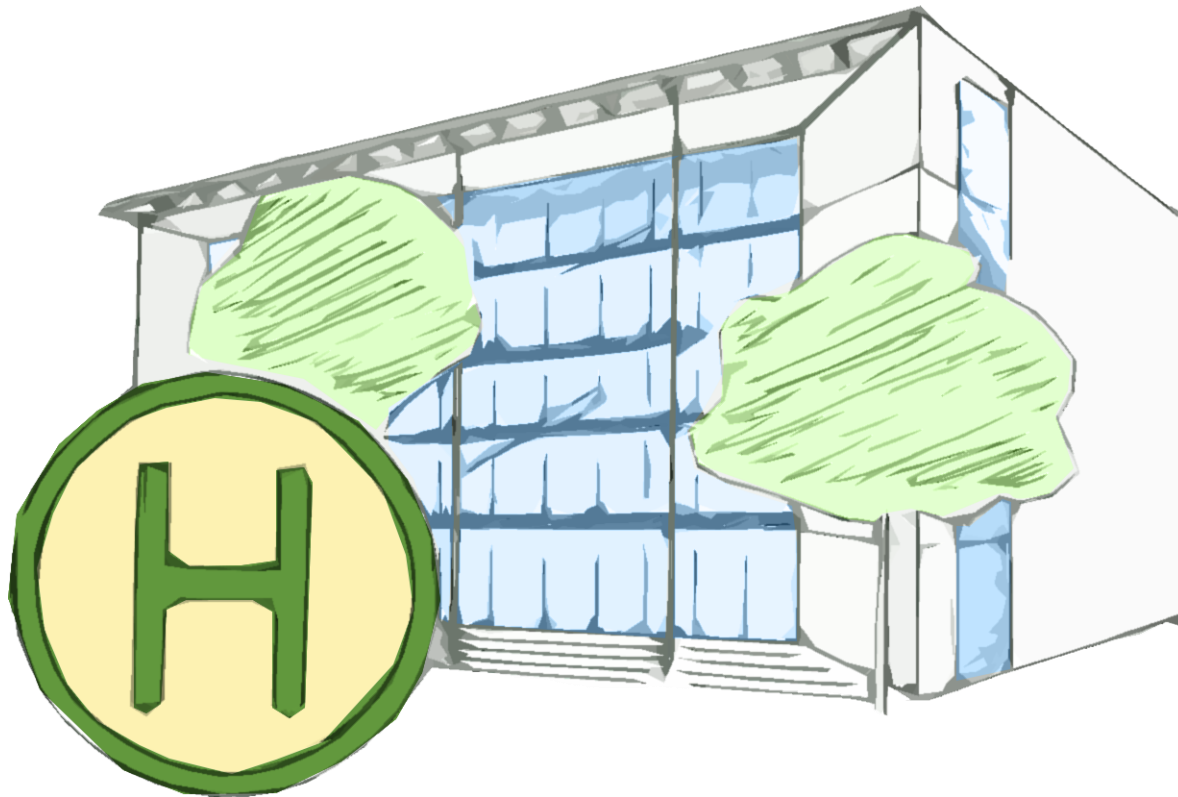
Application Development for Mobile and Ubiquitous Computing

TUDinTime Second Presentation

GroupNo. 5

Team: Tom Horak, Christina Korger

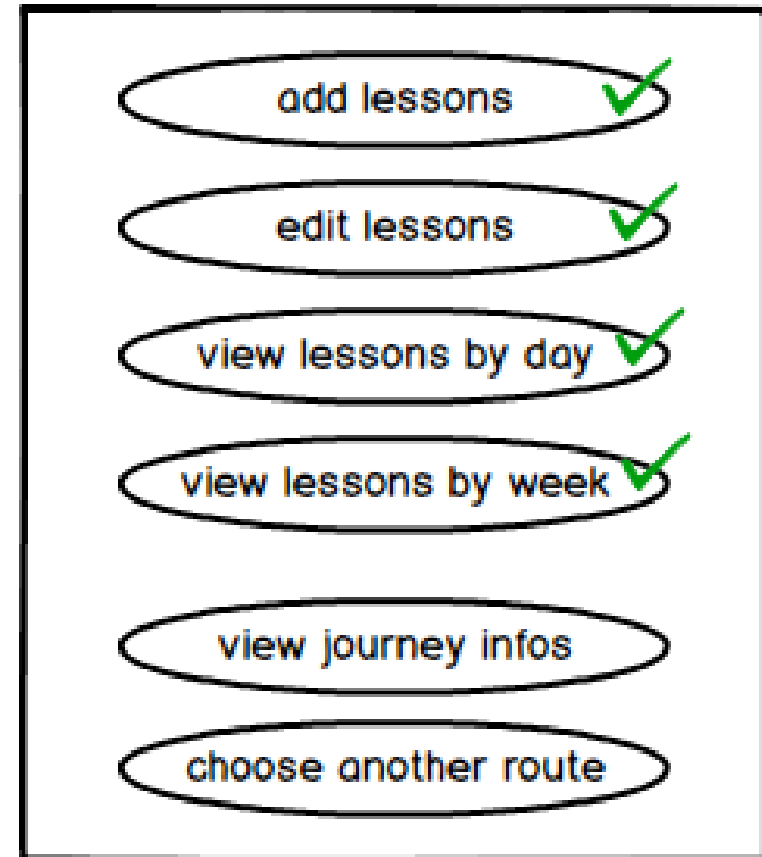
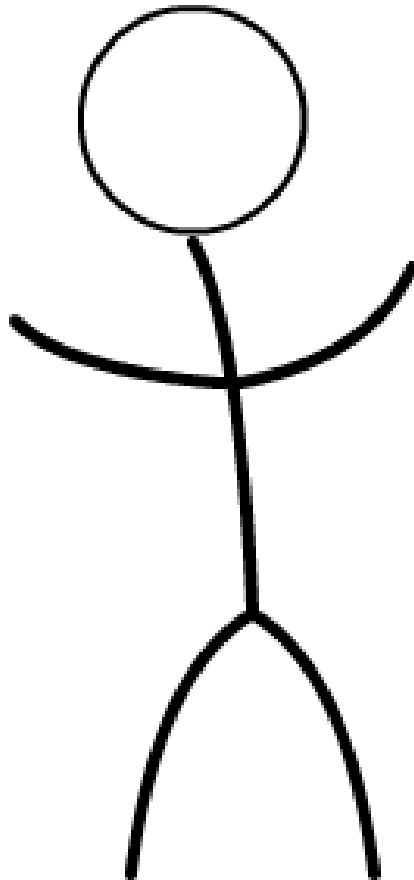
TUDinTime: timetable application for TU students with auto journey planner



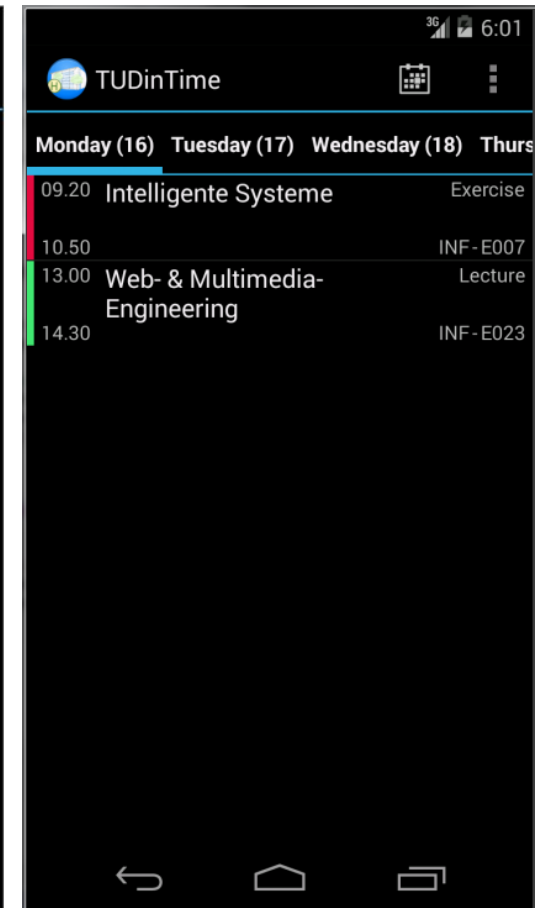
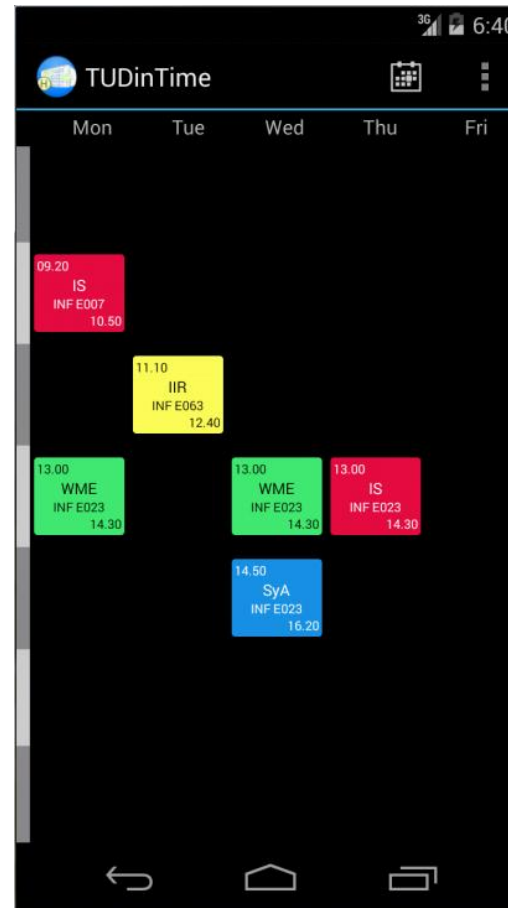
- Add lessons to timetable with time and room number
- Parsing room info to address of building
- Retrieving DVB connection from current position to address of the next lessons
- Automatic reminder some minutes before user has to start

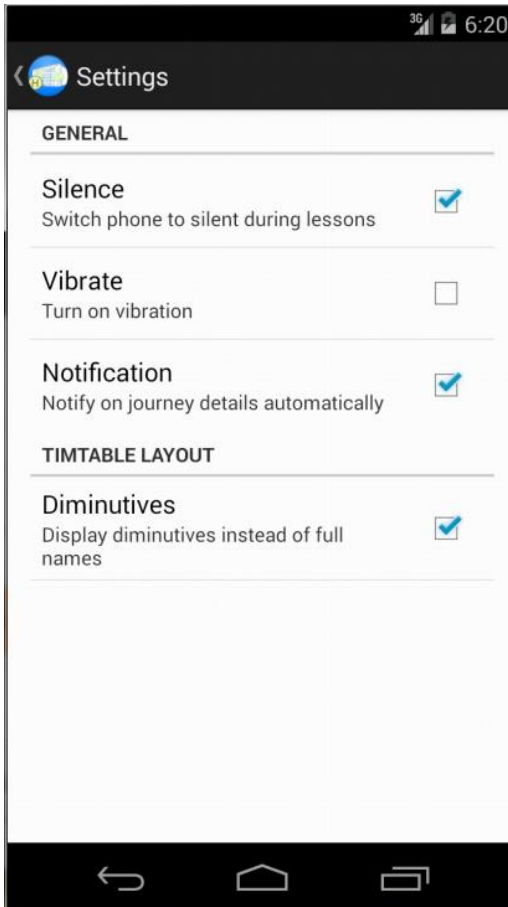


Application Scenario



- Three activities:
 - Timetable
 - Journey Info
 - Settings
- Timetable with day and week view
- Timetable is Start view
- Settings view to customize notifications





3G 6:20

Settings

GENERAL

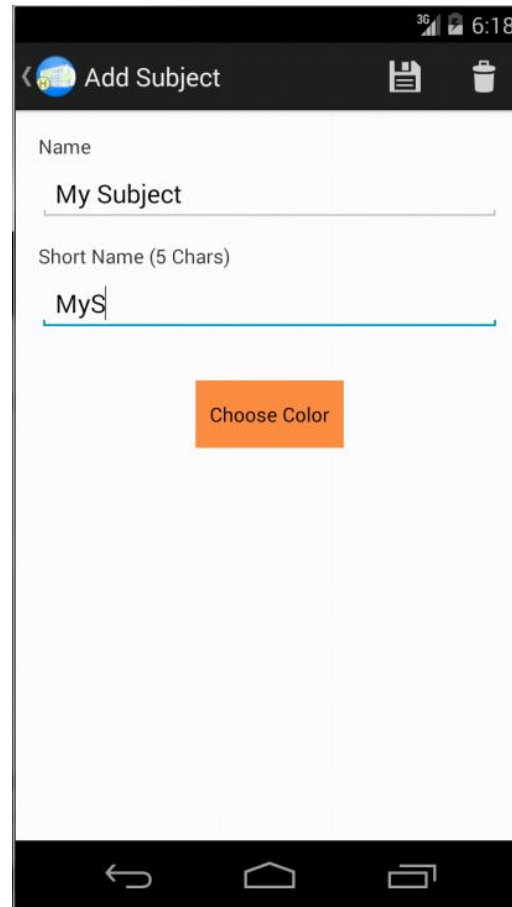
Silence
Switch phone to silent during lessons ☒

Vibrate
Turn on vibration ☐

Notification
Notify on journey details automatically ☒

TIMTABLE LAYOUT

Diminutives
Display diminutives instead of full names ☒



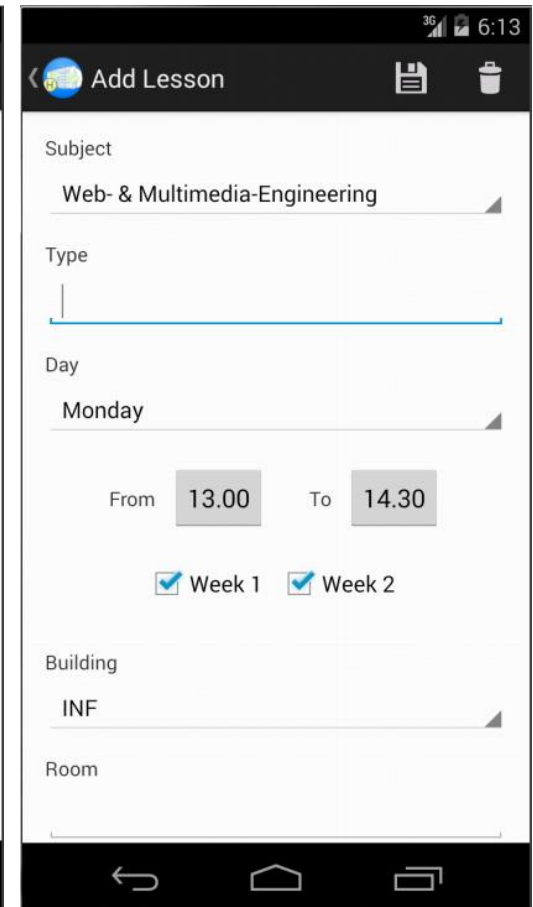
3G 6:18

Add Subject

Name
My Subject

Short Name (5 Chars)
MyS

Choose Color



3G 6:13

Add Lesson

Subject
Web- & Multimedia-Engineering

Type
|

Day
Monday

From 13.00 To 14.30

☒ Week 1 ☒ Week 2

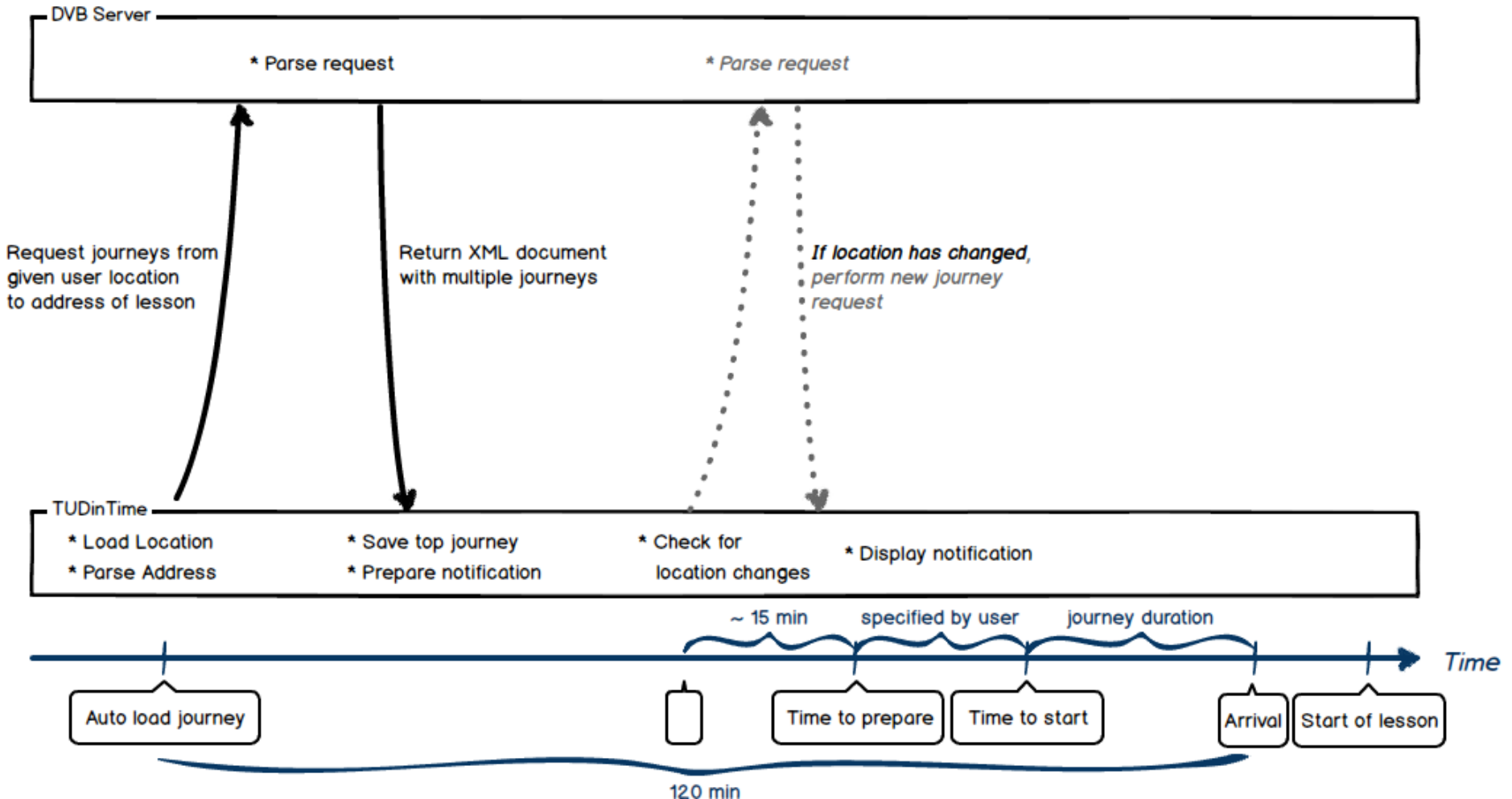
Building
INF

Room
|

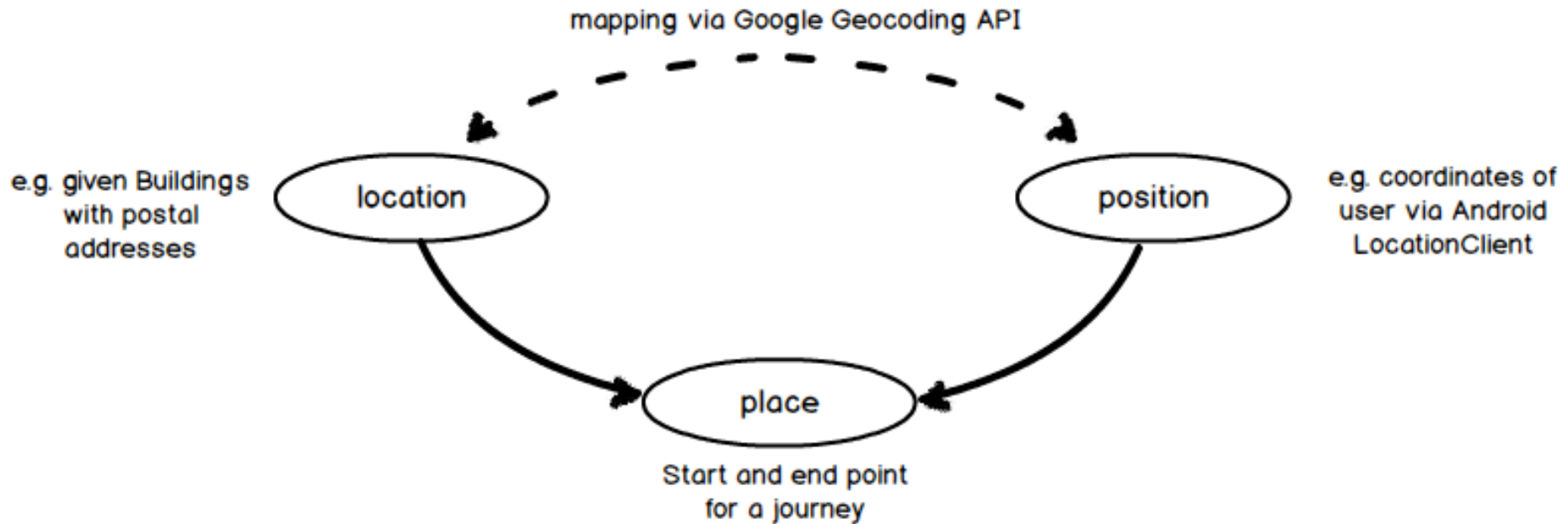
- Android application
- Localization through Android *LocationClient*
 - Request fine location
 - Used technology depends on users system settings
- Parsing address of GPS position via Google Geocoding API
- Request DVB connections over given API as HTTP-Request

- Localization:
 - Refresh time of position
 - Too frequent → High battery consumption
 - Less frequent → Wrong position
 - Quality of localization (GPS / UMTS / Wi-Fi)
- Network:
 - Behavior in case of connection problems
 - Provide a fallback strategy

• Prefetching:



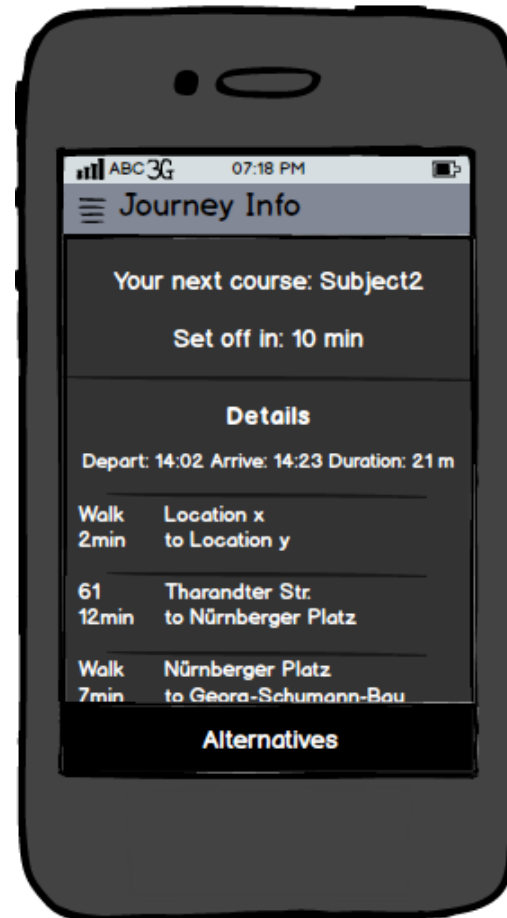
- Physical Context:
 - *Awareness of location:* Changes of user position
 - *Awareness of time:* Switch to silent during lessons
- Technical Context:
 - *Awareness of network:* Prefetching and fallback strategies to prevent network problems
- Personal Context:
 - *Awareness of schedule:* Notifications based on users given schedule



- Determine current position
 - Depends on user settings
 - Positioning (GPS) as well as tracking (WiFi / GSM)

GUI:

- Display journey info via notification or menu
- Show details about a DVB connection
- Optionally loading alternative routes



System:

- Notification service
- Provide building data
- Transformation of XML with journeys
- Timing of location checks

Christina

Tom

<i>Phase 1:</i>	<i>Basic timetable view</i>	<i>Interface to DVB</i>
<i>Phase 2:</i>	<i>Extend timetable view</i> <i>Settings view</i>	<i>Localization</i> <i>Parser of position</i>
Phase 3:	Notification Service	Journey view
Phase 4:	Fixes	Fixes

Thank you for your attention!

Questions?

