TECHNISCHE UNIVERSITÄT DRESDEN

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

Application Development for Mobile and Ubiquitous Computing

Calisthenics

Final Presentation

Group No. 12
Team:
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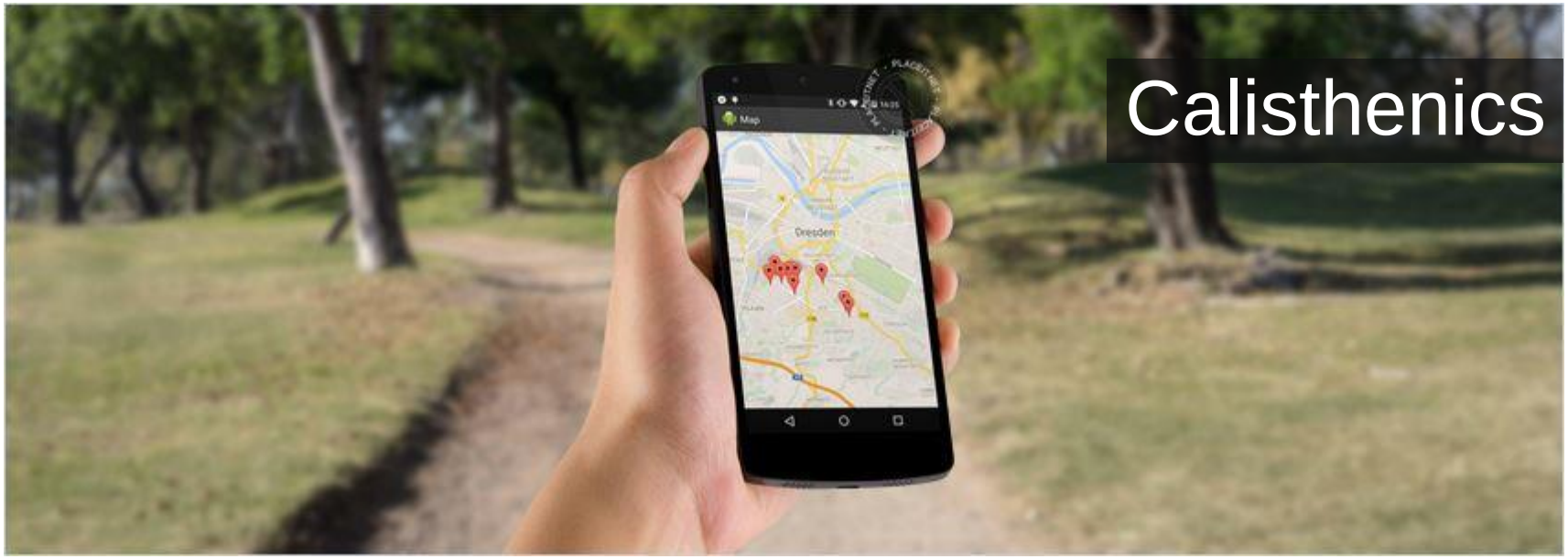

APP IDEA

app idea

- calisthenics:
  - functional fitness without weights
  - mostly outdoor
  - often done in groups
  - very social activity
  - needs some sort of outdoor equipment
- goal:
  - Connect people who want to do functional fitness
- problem:
  - where to find spots with like-minded people, bars, etc.?
- solution:
  - create a map that contains all the spots contributed by users
  - let people contribute their spots

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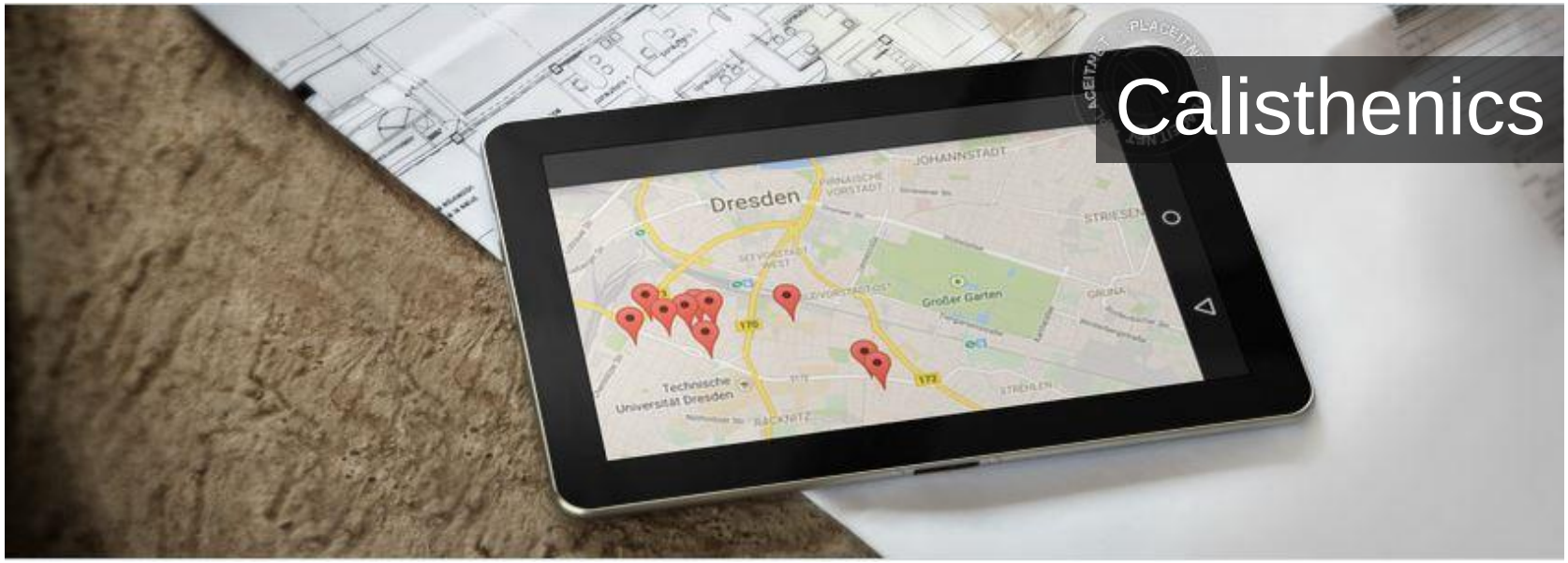
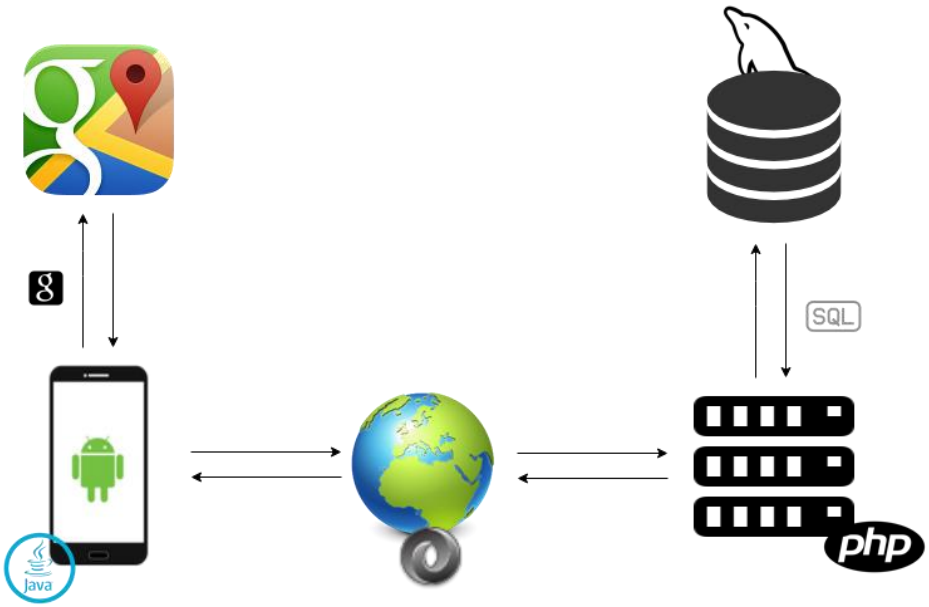


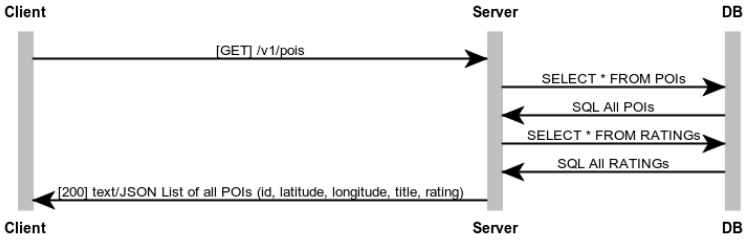
ARCHITECTURE

architecture

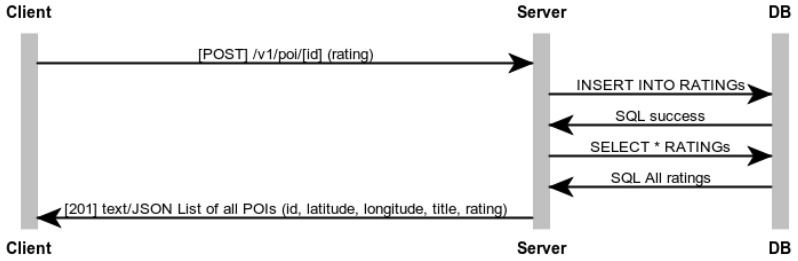
- client:
  - Android application using Google Maps API
- server:
  - remote webserver, PHP
- data transfer:
  - JSON
- database:
  - MySQL



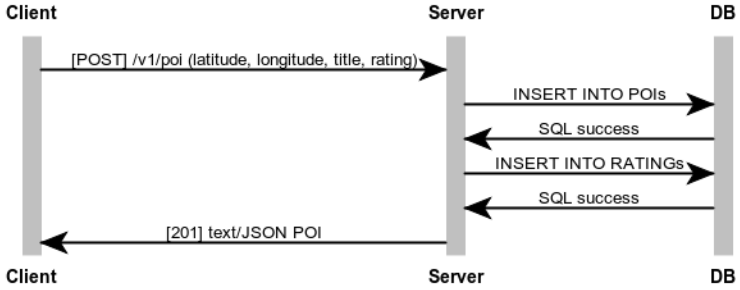
List all POIs



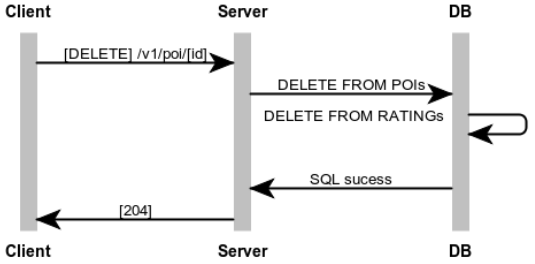
Rate POI

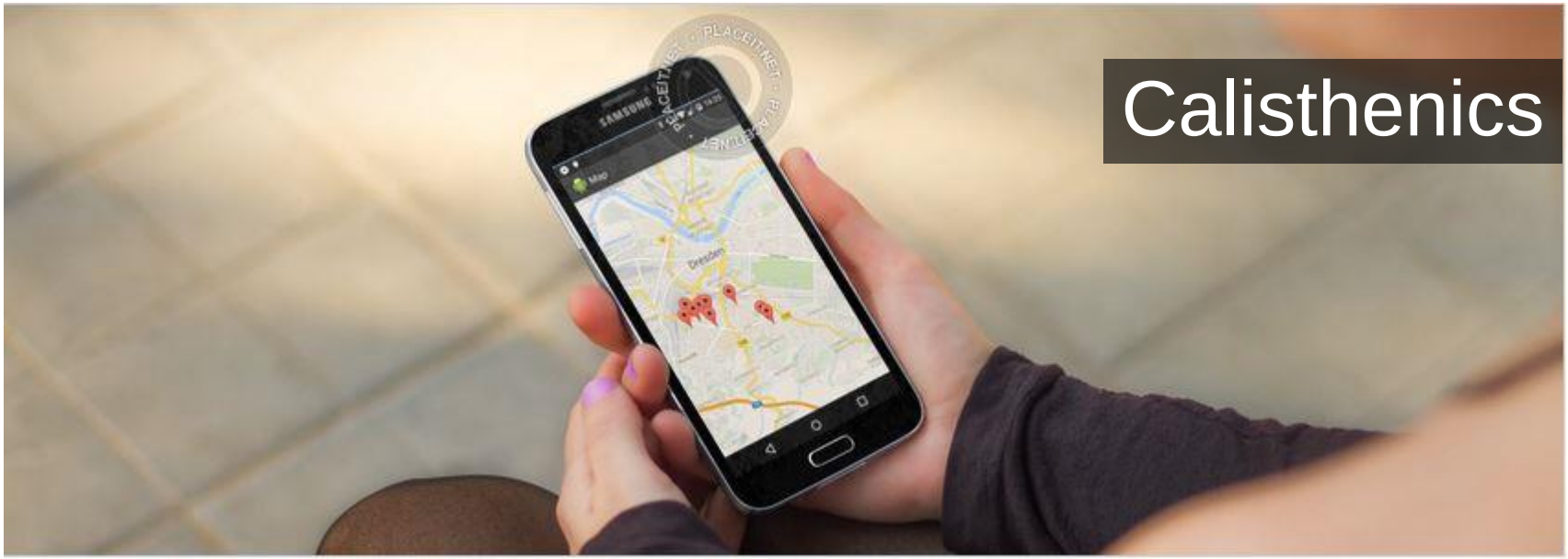


Create POI



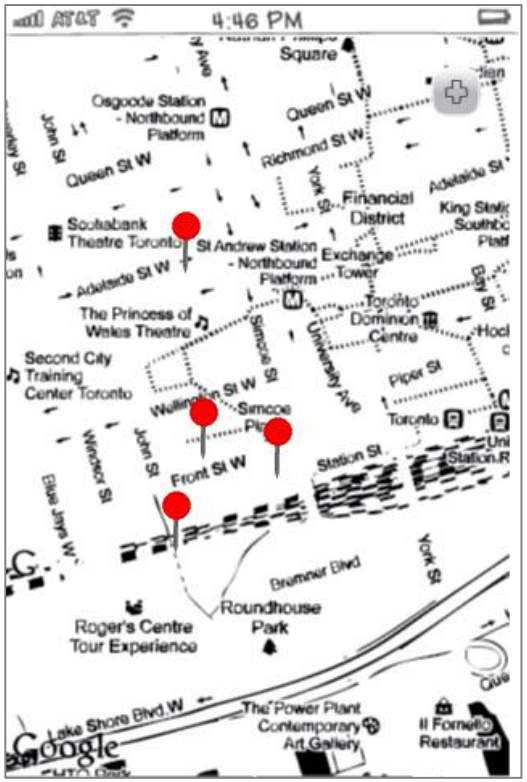
DELETE POI

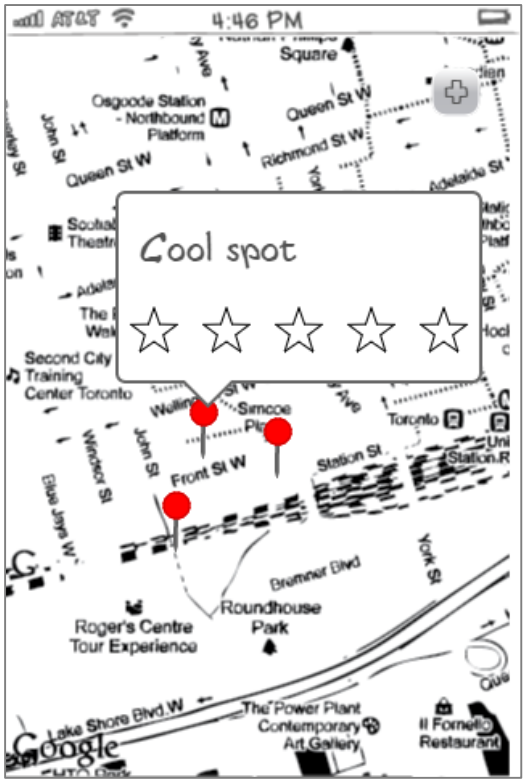




CONCEPT

mockup

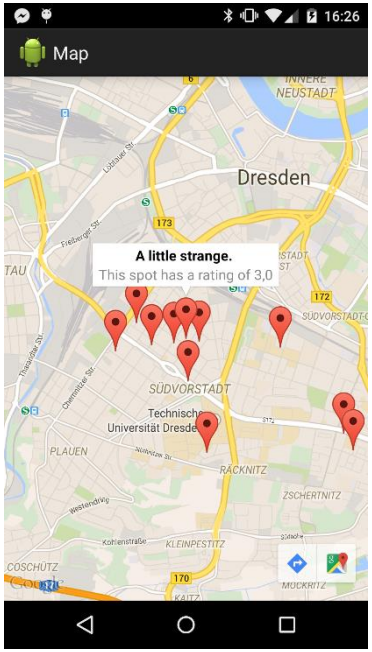

AT&T
4:46 PM
Square
Osgoode Station - Northbound Platform
Queen St W
Richmond St W
Financial District
Scotiabank Theatre Toronto
St Andrew Station - Northbound Platform
Exchange Tower
The Princess of Wales Theatre
Toronto Dominion Centre
Second City Training Center Toronto
Simcoe St
Front St W
Station St
Roger's Centre Tour Experience
Roundhouse Park
Bremner Blvd
York St
Lake Shore Blvd W
The Power Plant Contemporary Art Gallery
Il Fornello Restaurant
Google

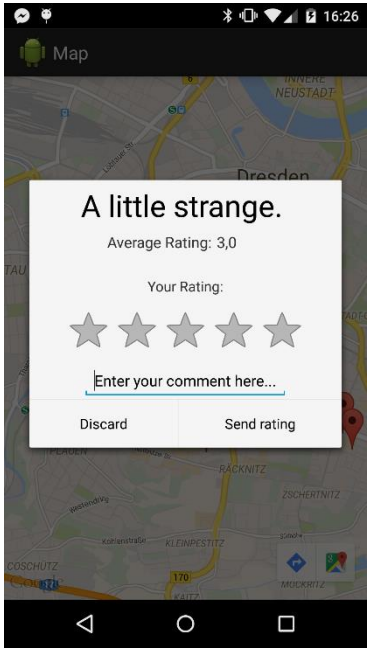

AT&T
4:46 PM
Cool spot
Square
Osgoode Station - Northbound Platform
Queen St W
Richmond St W
Second City Training Center Toronto
Front St W
Station St
Roger's Centre Tour Experience
Roundhouse Park
Bremner Blvd
York St
Lake Shore Blvd W
The Power Plant Contemporary Art Gallery
Il Fornello Restaurant
Google

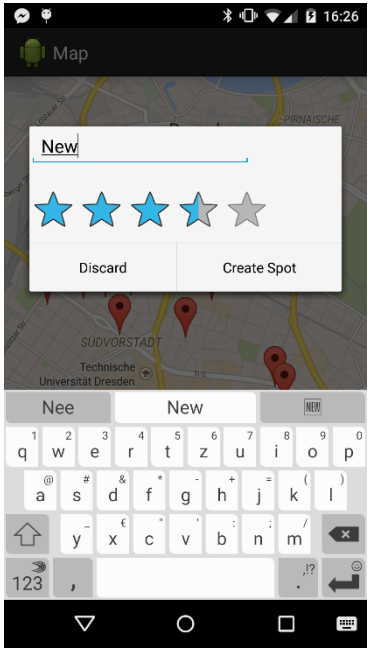

AT&T
4:46 PM
Create new spot
Newspotstreet 17, Ø12345 Spothouse
Title
New spot title
Rating
Ok
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
Space
return

prototype


16:25
Map
Dresden


16:26
Map
Dresden
A little strange.
This spot has a rating of 3,0


16:26
Map
A little strange.
Average Rating: 3,0
Your Rating:
Enter your comment here...
Discard
Send rating


16:26
Map
New
Discard
Create Spot

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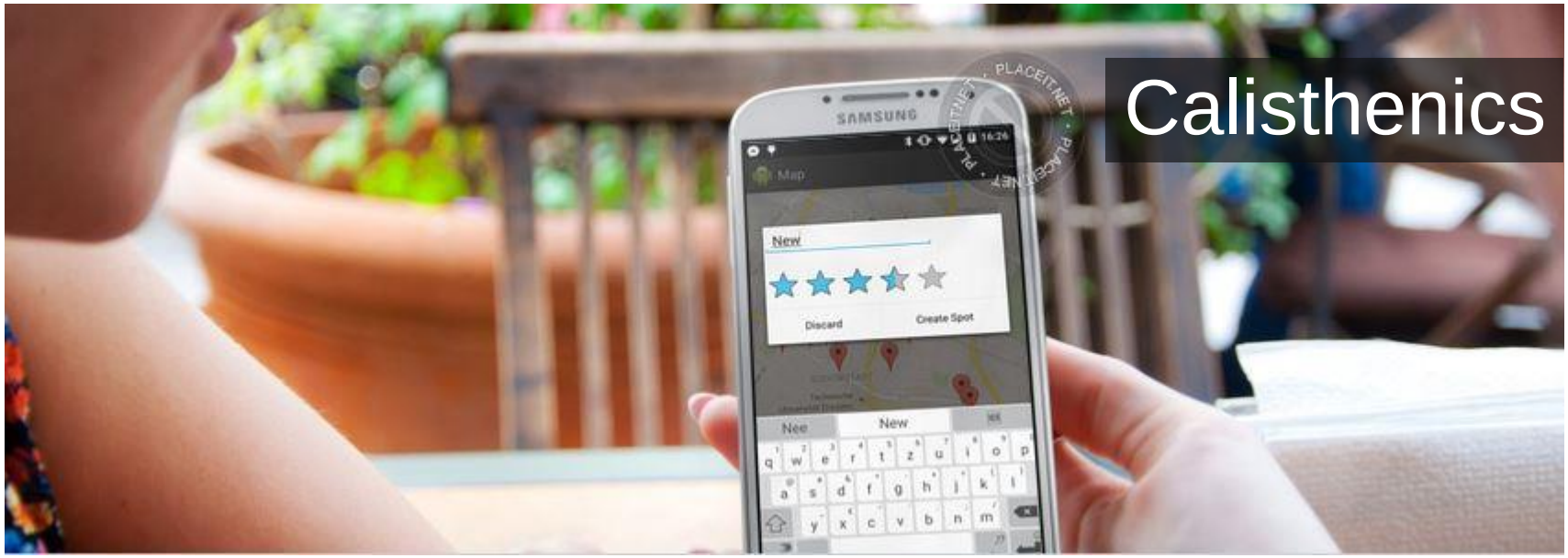


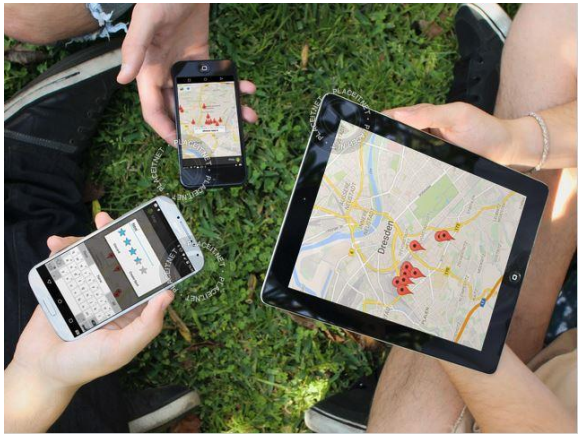
ARCHITECTURE

challenges tackled

- usability challenge:
  - build a UI with good User Experience on a small screen
- connectivity challenge:
  - cope with bad or no connection
  - limited bandwidth
- offline challenge
  - provide service even when offline

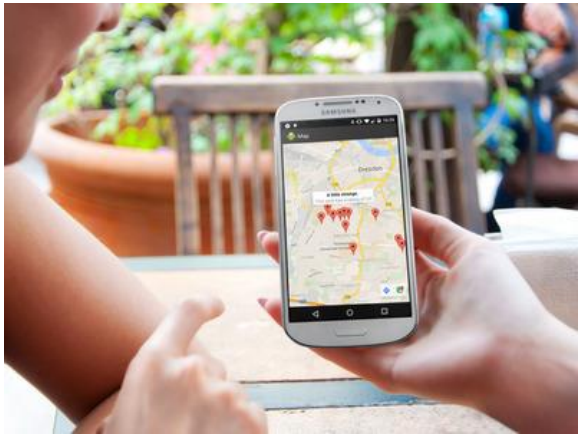
adaptation details

- usability challenge:
  - very useful features provided by Android
  - dynamic layouts to make use of screen real estate
- connectivity / offline challenge:
  - create a new POI when offline and send it when a connection is established
  - gather the POIs once and display them even when offline
  - further improvement: load only points that are within the users current zoom level



pitfalls & experiences

- setting up server / API
  - hard to debug whether the problem caused by server or the app
- asynchronous events in Android
  - not so easy to understand the event-driven approach
  - how to get data from a thread?



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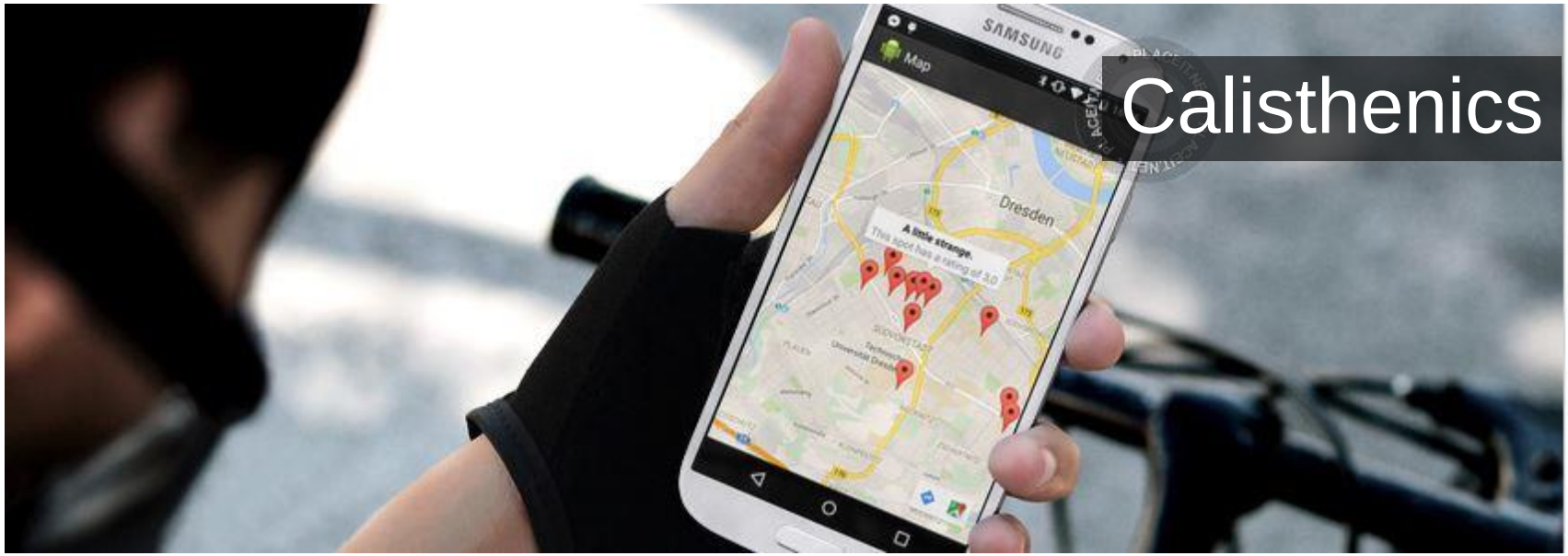

DISSCUSSION ASSESSMENT

Calisthenics