



TECHNISCHE
UNIVERSITÄT
DRESDEN

Application Development for Mobile and Ubiquitous Computing

Surfing Adventure

Group 9:
Diogo Serrano
Raquel Ferreira

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Appliction Scenario

“*Surfing Adventure*” - An easy way to find new adventures, meet new people and new places:

- Find new adventures near you and join them;
- Take a picture for each adventure, save it in your gallery so you can later revisit those fun moments;
- Be proactive and you will soon be able to create your own adventures!

Context / Adaptation

Usability Challenge:

Context:

Capture the device's location, using `android.location.LocationManager`

(`LocationManager.GPS_PROVIDER` && `LocationManager.NETWORK_PROVIDER`)

Adaptation:

We intend on only returning all the adventures available inside of a given radius, centered at the device's location, and also allow the user to filter the adventures by dates.

How?

By using the user's current location (latitude and longitude) and the adventure's location. The radius is chosen by the user and by default is 2 kilometers and he/she is allowed to filter the adventures by date. With the help of GeoFire/Geoquery we can then show the adventures inside the given radius.

Context / Adaptation

Energy Challenge:

Context:

Reduce battery consumption of the GPS by only detecting the user's location with **GPS from minute to minute.**

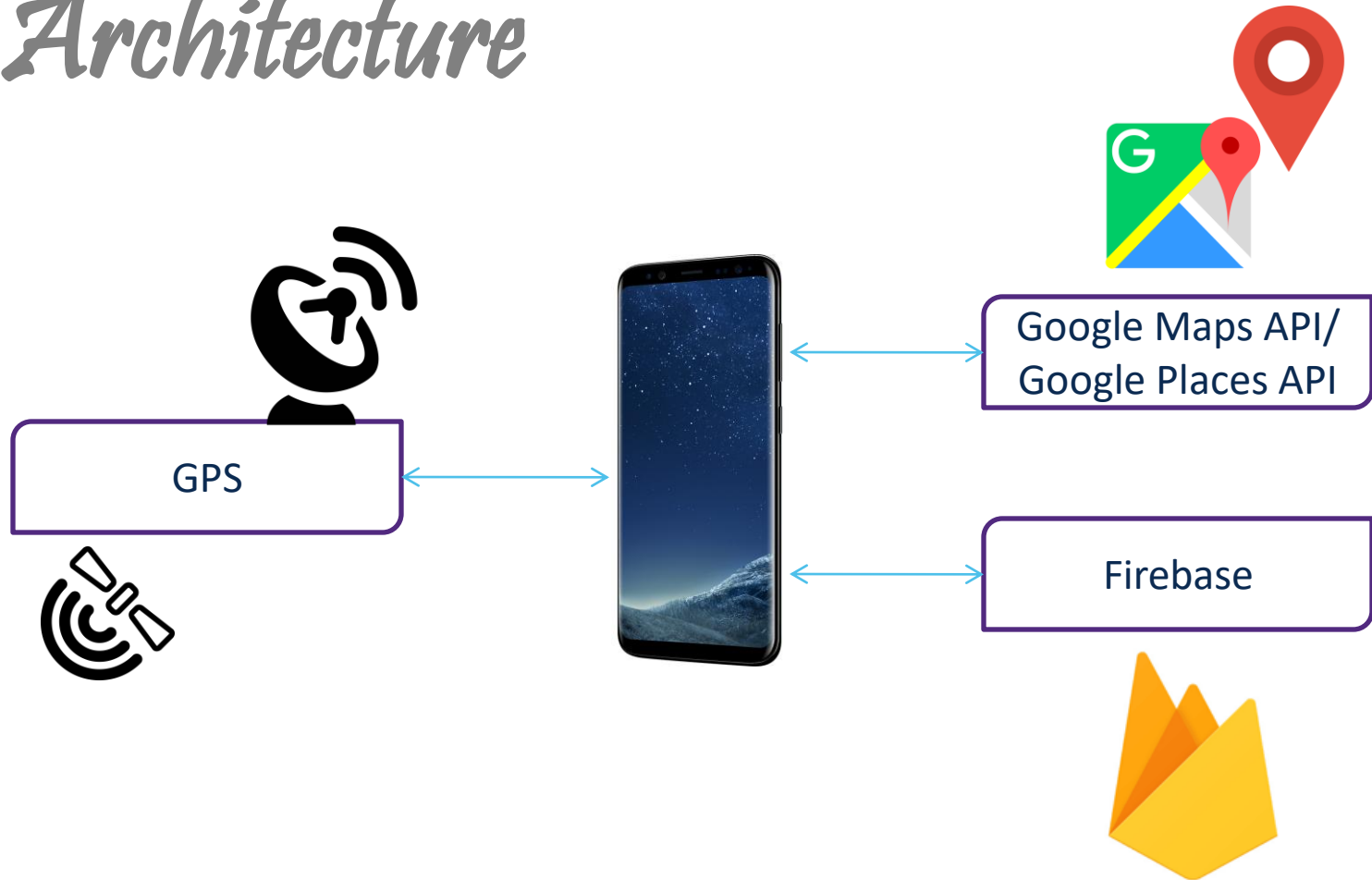
Using `android.location.LocationManager`

Adaptation:

It's not necessary for the user to use the GPS all the time, because by rule the users do not move a long distance in that time which provides us with some leeway to **decide when to start and stop tracking the user.**



Architecture



Work Plan

02.11.2017: **First presentation**

November

- Backend development
- Discussion of the User Interface Design
- First steps at Android Implementation

14.12.2017: **Adaptation concept presentation**

December

- Discussion and implementation of the geolocation functionality
- Frontend development
- First functional prototype

January

- Testing and bug fixes
- Final version
- 01.02.2018: **Final presentation**