

Application Development for Mobile and Ubiquitous Computing

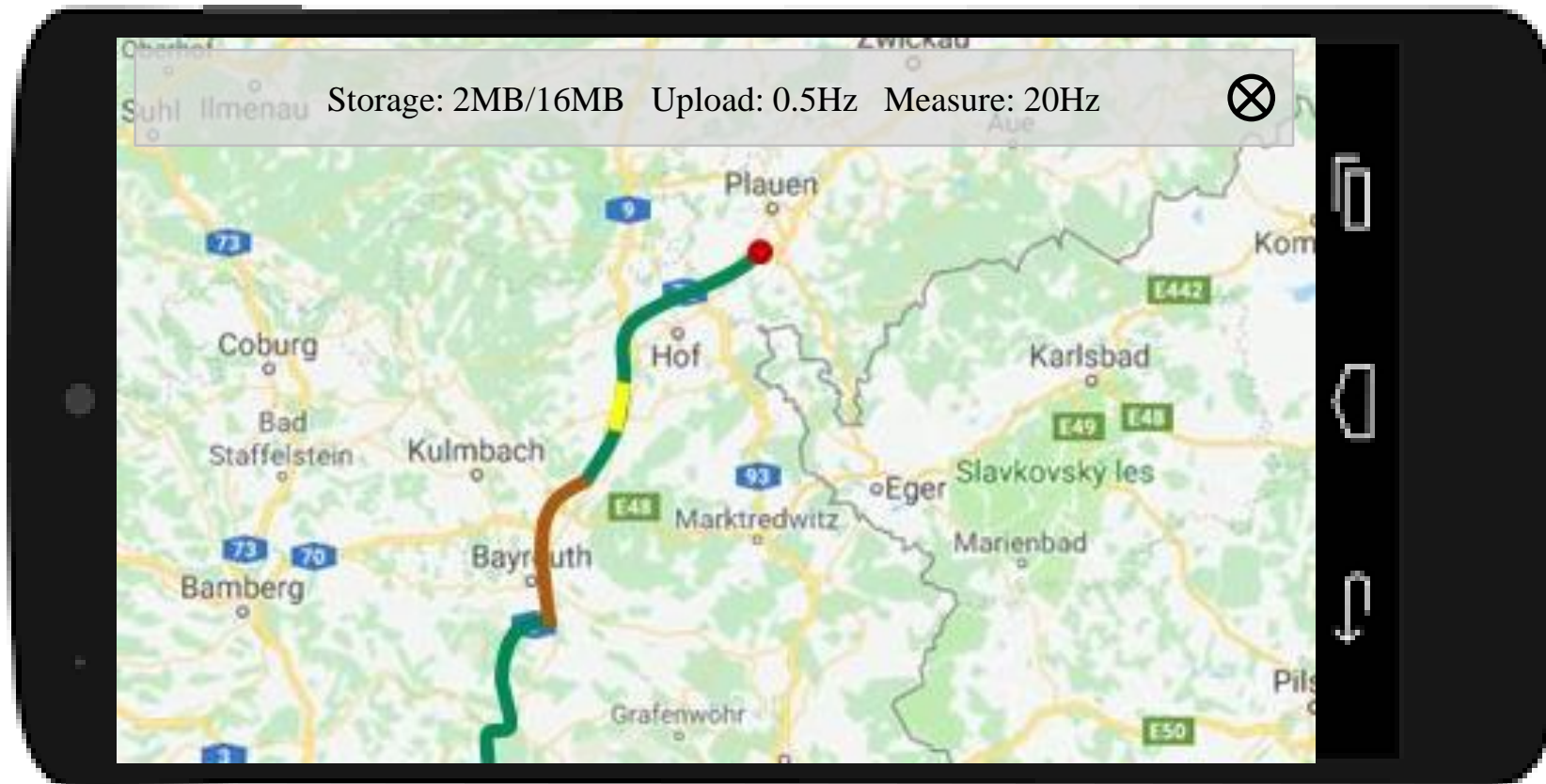
# WATCH MY ROUTE

Alexander Schwerin  
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## Core-Idea

- Record GPS-location while driving / cycling
- Provide color-overlay of route for:
  - Interpolated speed
  - Recorded Signal-Strength
  - GPS-Accuracy
  - Acceleration
- Share current/past route with friends
- Save locally and export to other services (e.g. GoogleEarth)

# Mockup



Watch My Route

# Challenges + Adaption mechanisms

## Connectivity + Offline

- Delay measurement-upload when offline
- Combine multiple data-points into one upload while connected

## Energy

- Scale sample and upload-frequency with remaining battery charge
- Disable upload when below energy-threshold → “Offline”

## Form Factor

- Retroactively merge data-points on low storage-space (local only)
- Plugin: Check for additional providers
  - Car-GPS
  - Wearables

# Technologies



Client-Plattform:  
Android

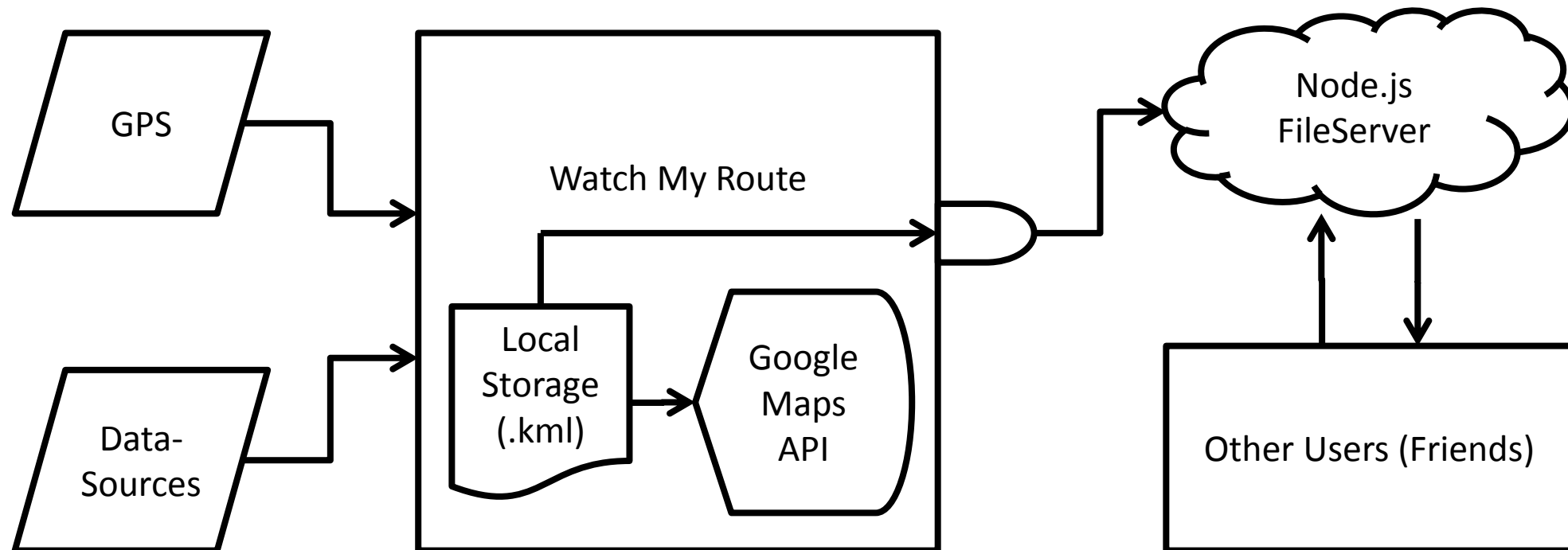


Map-Display, Overlay:  
Google Maps



Server:  
Node.js

# Architecture



# Workplan

- 24.10.2018: Technology research
  - **02.11.2018: First presentation**
  - 21.11.2018: First client-prototype  
(Fake Data, no upload)
  - 28.11.2018: Server-deadline
  - 09.12.2018: Connect client to server
  - **14.12.2018: Second presentation**
  - 16.12.2018: Test on real device
  
  - **01.02.2019: Final presentation**
- Data-source priority:
    - GPS: High
    - Speed (interpol.): Medium
    - Acceleration: Medium
    - Network-Coverage: Low
    - Car-GPS/wearable: None, Plugins