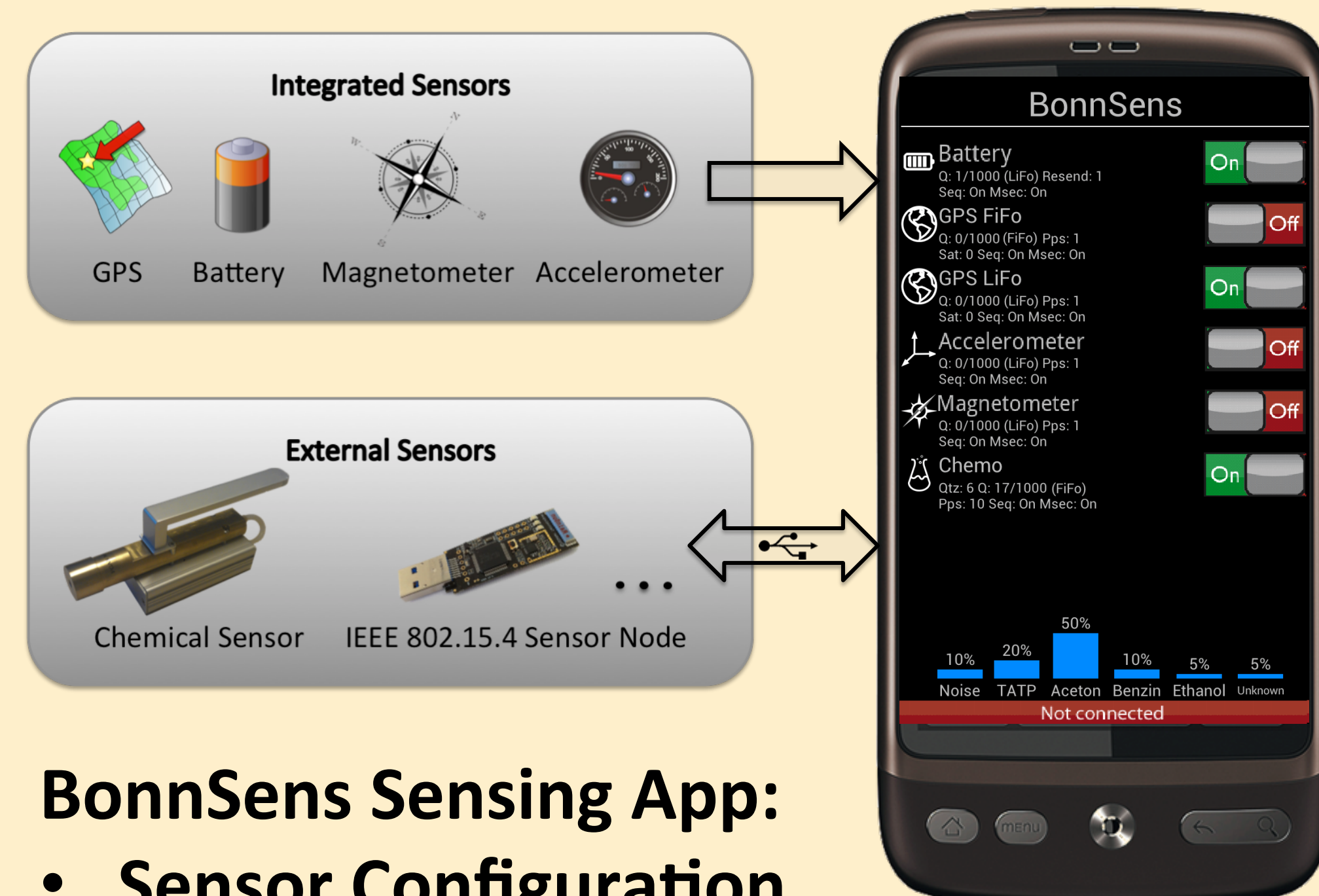


BonnSens: A Mesh-based Command and Control Sensing System for Public Safety Scenarios

Nils Aschenbruck, Jan Bauer, Raphael Ernst, Christoph Fuchs, Sascha Jopen, Jonathan Kirchhoff

Mobile Sensing Client



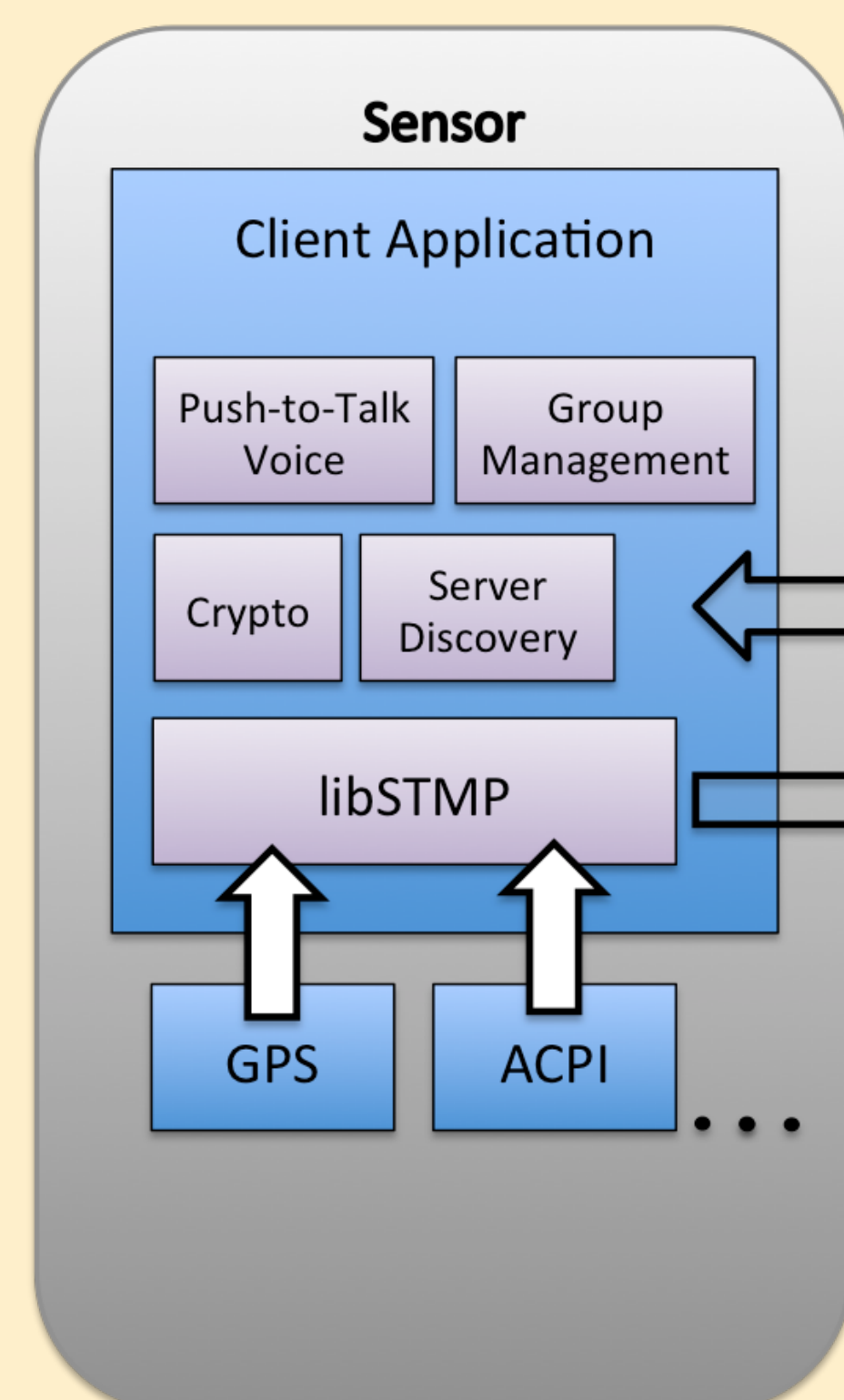
BonnSens Sensing App:

- Sensor Configuration and Parametrization GUI
- currently in use with HTC Desire and Samsung Galaxy Nexus i9250

Sensor Architecture

Sensor Application

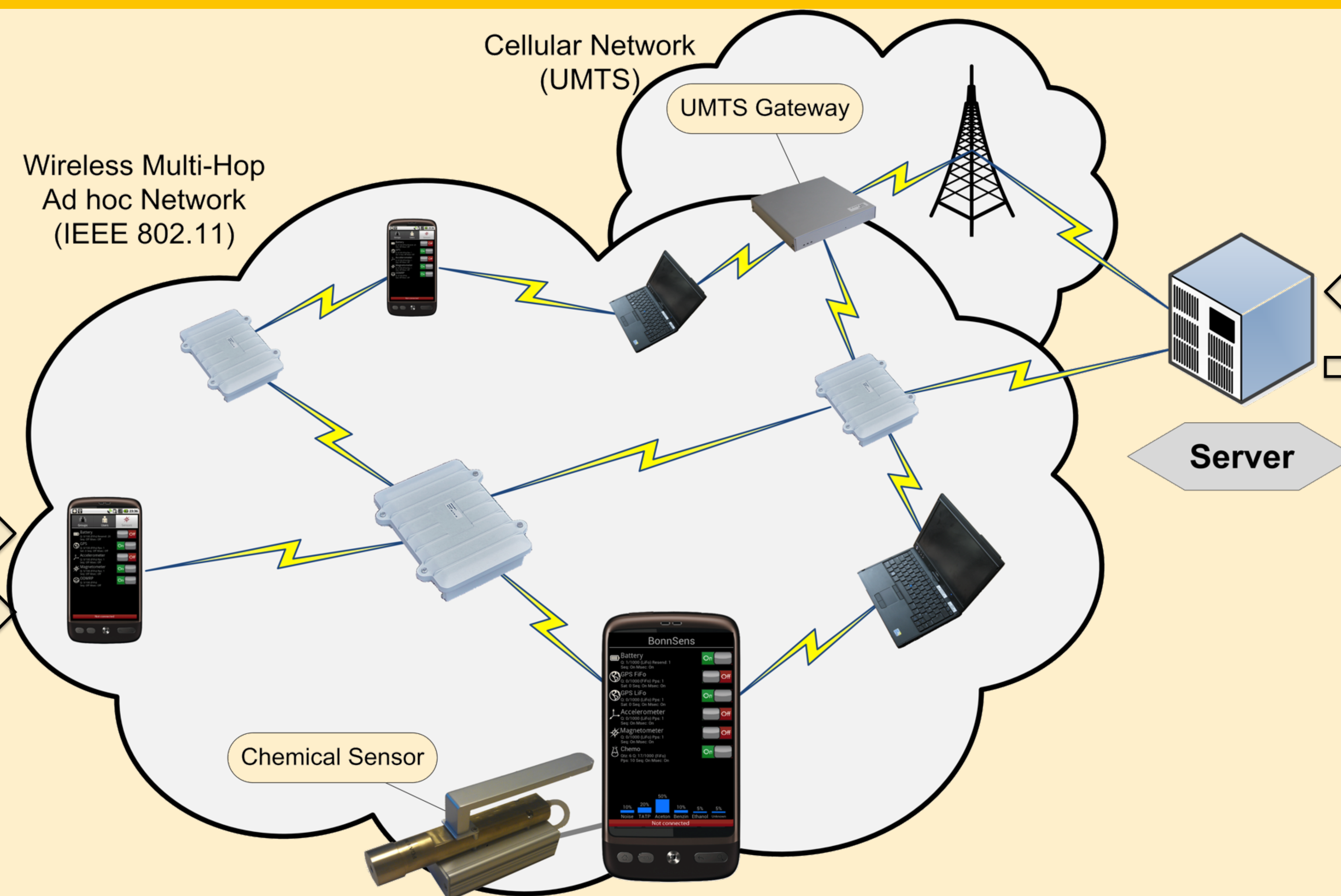
- BonnSens-App in Android OS
- gathering of sensor information
- modular sensor plugins



On-Site Deployment in Disaster Area Maneuvers

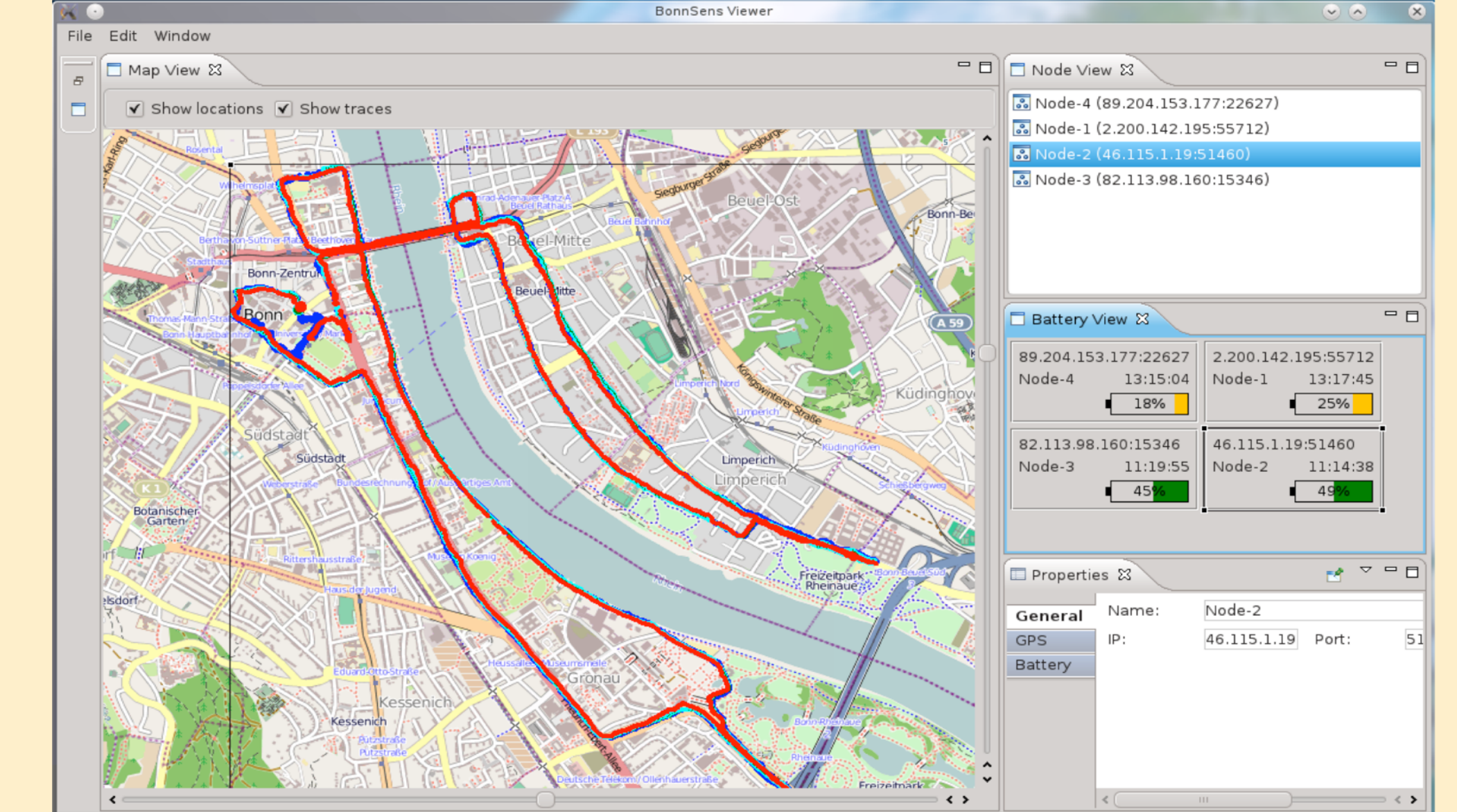


Wireless Ad-Hoc Mesh Network



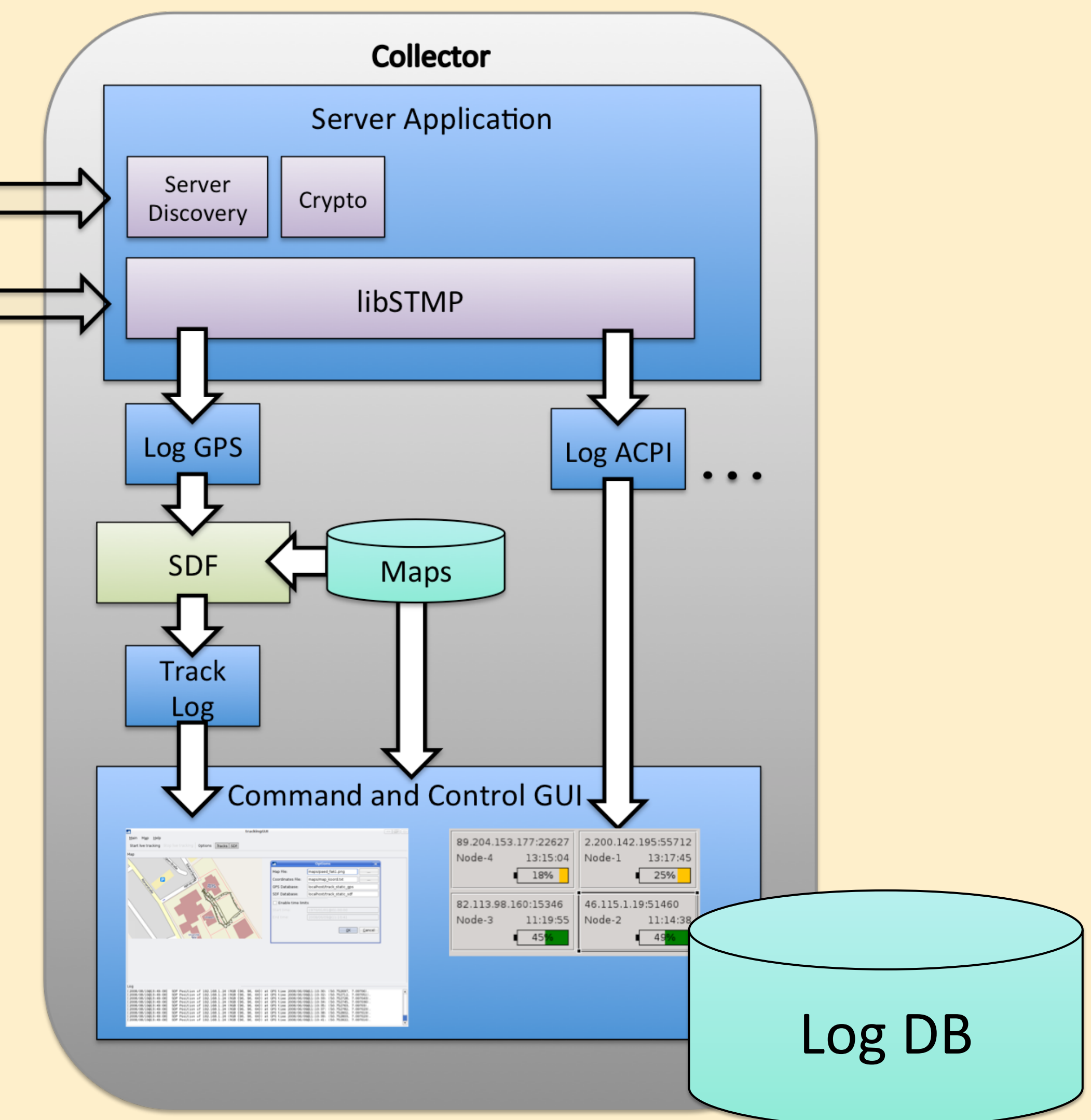
- On-Demand Multicast Routing Protocol (ODMRP) with Link Quality Estimation Metric implemented using Click Modular Router on Android OS, OpenWRT, and Linux
- Sensor Data Transport and Management Protocol (STMP) implemented as commonly usable C library

Command & Control Server



BonnSensViewer: Situational Awareness enabled by Tracking GUI

Collector Architecture



Sensor Data Processing and Visualization

- GUI based on Eclipse Framework
- Sensor Data Fusion using ASD Filter
- OpenStreetMap
- PostgreSQL Database



Distributed  tems
<http://cs.uos.de/sys/>