

# Wi-Fi positioning System

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## 1 Requirements

The project requirements are the following :

- Use TP-LINK access points (N600 and/or TL-MR3220)
- Perform RSSI measurements on the AP (write C/C++ software)
- Develop an Android application for displaying the mobile location
- Develop a positioning server (J2E) running on Apache Tomcat.
  - Use fingerprinting positioning
  - Fingerprint database : either simulated or measured
  - Data : SQLite, MariaDB, PostgreSQL

Options :

- Trajectory smoothing (Kalman or other)
- Complex RSSI fingerprint matching.
- Multi-sensor fusion (add other measurements to RSSI).

An example of system architecture can be found at the following URL:

<https://www.google.com/patents/US8442553?hl=fr>

Tools for AP developpment are available here:

<http://frederic.lassabe.free.fr/wifi>