PPE Project: Vehicular Box (VBox)

The driving safety stays the primary concern of vehicular user. The industry activities to make safe cars are limited by slow pace marketing solutions. By contrast, the smartphone industry is advancing quickly. Existing smartphones are endowed with multiple wireless interfaces and high computational power, being able to perform a wide variety of tasks. On Board Diagnostics (OBD-II) interface or standard is able to give the vehicle owner access to the status of various vehicle subsystems. Since this standard is mandatory since 2001, the solution is applicable to all vehicles aged 16 years or less. In addition, an IEEE 802.11 p or ITS-G5 of vehicles has been developed for future vehicular radio Ad-hoc network. The objective of this project is to design and prototype a bridge or box between smartphone's wireless devices, the OBD interface, and IEEE 802.11 p network. The design of a such box should consider the scalability of the solution for other radio networks. One possible use case of the system is the detection and sharing of emergency situations such as accidents.

Skills and profiles

Embedded systems (Linux), Android programming, Wireless networking, Passionate team