CELTIC
Telecommunication Solutions

WiSafeCar

WiSafeCar

Wireless traffic Safety network between Cars

WiSafeCar aims at increasing performance and reliability of the wireless traffic service platform for traffic safety improvements.

CARLINK

Improved Car2Car and Car2Infra

IEEE 802.11p

Content centric networking parts

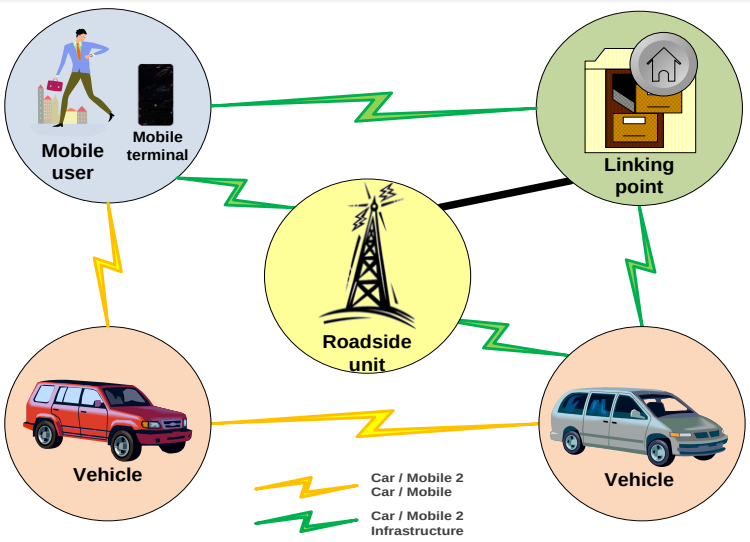
Data security integrity privacy

Accessibility and safety services

WiSafeCar

WiSafeCar focuses on building a comprehensive, secure and reliable solution for **V2I** (vehicle to infra) and **V2V** (vehicle to vehicle) communication. The main challenges are to generate efficient V2I and V2V network and fast delivery of critical data regardless of the location or presence of the other vehicles and generation of services which not only enhance **traffic safety** and efficiency but also exploit the **vehicle data** and the WiSafeCar **SOA platform**. The ultimate goal is to create an intelligent communication platform for vehicles where they can deliver their own observations of traffic and weather conditions to the traffic service core. This information is delivered back to the vehicles as analyzed (and forecasted) information about **road weather conditions**, immediate accident or **incident warnings**. The WiSafeCar platform will also be the support layer of a secured and real-time **dynamic transport on demand** system.

Communication architecture



Main results of the WiSafeCar project

1. advanced traffic and weather service platform and framework based on the developed scenarios
2. secure and efficient wireless traffic service platform implementation with security features, customized to the designed set of WiSafeCar services
3. real-time local road weather, accident/incident warning and other services specialized for traffic, integrated to the platform
4. urban transport and traffic data management application
5. Application for urban traffic real time bidirectional information broadcasting and sharing and exchange with the traffic control center
6. Vehicular networking standard and protocol evaluation, analysis, simulations, testing and implementation
7. Proposal of efficient data authentication mechanism for vehicular communications, Proposal of efficient user identification (trust) mechanism
8. Applicability evaluation of dissemination networking to wireless traffic service platform,
9. analysis of multiple radio networking using different wireless access protocols

Impacts

The intended results are useful for the car industry, internet, radio providers and ad-hoc networks, but in addition the project will offer new advances open to the European society in terms of optimized mobile services, open software for future research, numerical results from the test of the network and the weather model and many other similar outcomes of great impact. The platform for car-to-car network with a real-time weather and other important data delivery enables also variety of other applications and services currently implemented in handheld devices. This is due to the integrated networking technologies and unlimited power resources in cars compared with the handheld devices. The development and gathering of a temporal sensitive data from several sources with different levels of accuracy is of a great need to deploy a mobile sensor network.

Dynamic carpooling

Car to car communication

Traffic safety
Traffic management

Geolocalized weather hazard warning

MOBISOFT · UNIVERSITÉ DU LUXEMBOURG · FINNISH METEOROLOGICAL INSTITUTE · CENTRE DE RECHERCHE PUBLIC HENRI TUDOR www.tudor.lu · VTT · SUNIT · infoTripla · TAIPALE TELEMATICS · Ubistream · UBIQUITOUS UBRIDGE

WiSafeCar – Project ID: CP6-021 – Start/End dates: 01/2009 ~ 12/2011

Coordinator: Pekka Eloranta, Mobisoft, Finland
E-mail: pekka.eloranta@mobisoft.fi

Web: http://www.wisafecar.com