NAVISP
Smart Mobility Activities

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06/03/2019

EL1-007, **Cooperative Navigation and Cloud Processing**

The study of new positioning and navigation techniques relying on the exploitation of crowd-sourced data and GNSS signal snapshots and/or GNSS observables from low-end sensors or devices connected to the Internet, enabled by high-data-rate and low-latency wireless communication networks, and based on the cloud processing of the data.

Objective: to develop new innovative positioning techniques relying on crowd-sourced data and GNSS signal snapshots from multiple users.

EL1-010, Low-Cost GNSS Antenna Arrays for Improved Performance, Anti-Spoofing and Meaconing and Interference Mitigation

The design and development of a prototype representative of a multi-element GNSS antenna and receiver specifically for Advanced Driver Assistance Systems (ADAS) applications.

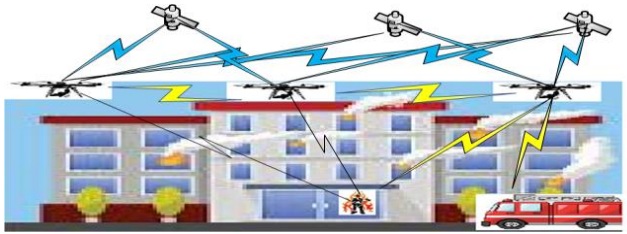
Objective: create a prototype multi-element GNSS antenna with Digital Beamforming, that is able to reduce interference and mitigate spoofing and jamming

THALES

EL1-018, Low-RF Fast Deployable Systems for Emergencies in Difficult Environments

Crisis situations, following natural or human made disasters are unexpected and can take place anywhere and anytime, causing the crisis management to rely heavily on available telecom and localisation infrastructure to support the execution of rescue operations. These infrastructures, however, are not available or are partially functional during the crisis situations. This project aims to study, design and develop fast deployable systems for emergencies in difficult environments.

Objective: design a deployable system to support PNT needs in emergency scenarios, as well as developing a signal generation and processing platform to validate the benefits of system/signal types.



EL1-021, **Integrity Monitoring and Prediction Concept for Autonomous Car Resilience and Safety**

Development and proof of the practical feasibility of an innovative Integrity Risk monitoring and prediction concept for autonomous vehicles.

The results of the activity will provide:

Objective: The results of the activity will provide:

- To assess the achievable integrity performance under the identified scenarios;

- To assess the suitability and cost effectiveness of the developed integrity monitoring and prediction concept(s);

- Create recommendations for introduction of the developed integrity concept in the domain of autonomous vehicles.

To be presented by Rajesh from NSL

EL2-013, **Next Gen GNSS Antenna**

The activity aims to develop a multi frequency/multi constellation ceramic-based GNSS antenna, based on the proprietary dielectrically loaded multi-filar helix technology and optimised for use with the new GNSS waveforms.

The antenna is intended to be used in the driverless car market.

Objective: An antenna that enables centimeter-level accuracy even in the harshest environments (urban canyons, foliage etc.)

EL2-016, **BB-PROC**

Development of a prototype GNSS software receiver for automotive Advanced Driver Assistance Systems (ADAS) applications (autonomous cars). The project represents the first Phase of a future industrial development.

Objective: to solve critical design issues (correlator engine architecture) and to set up the necessary development plan to reach Automotive Safety Integrity Level B (ASIL – B) certification required in the future for ADAS applications.

m3 SYSTEMS

EL2-020, **Triband antennas for automotive**

The MISSATO project will develop 5 distinct GNSS antennas operating on L1/L2/L5 bands on the GPS and Galileo GNSS networks. The products will able to receive L1/L2/L5 GPS/Galileo frequency bands required for vehicular/asset tracking and device management.

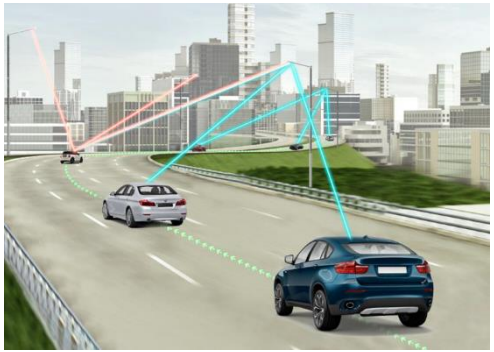
Objective: Develop antennas specifically designed for applications requiring cm-level positioning unavailable with older GNSS antennas.

taoglas
antenna solutions

EL2-031, **AGBP**

Accucom will develop a ‘Ground Based’ Positioning system, constituted out of a low-cost stand-alone Ground Infrastructure, and a mobile radio ranging system using trilateration to calculate a position.

Objective: enable 'Navigation Anywhere', with guaranteed accuracy, unaffected by atmosphere, in the fractions of metres.



ACCUCOM