RESEARCH PROJECTS

EVARILOS

EVARILOS addresses major problems of indoor localization research: The pitfall to reproduce research results in real life scenarios due to uncontrolled RF interference, and the weakness of numerous published solutions being evaluated under individual, not comparable and not repeatable conditions. Accurate and robust indoor localization is a key enabler for context-aware Future Internet applications.

HOW DOES IT WORK?

EVARILOS developed a benchmarking methodology enabling objective experimental validation of and fair comparison between state-of-the-art indoor localization solutions. This methodology considers not only accuracy metrics, but also complexity, cost, energy, and, most importantly, RF interference robustness metrics. The project contributes to improve the interference robustness of localization solutions through (a) multimodal approaches leveraging different localization methods; (b) introducing environmental awareness and cognitive features; (c) leveraging the presence of external interference. The EVARILOS benchmarking methodology and interference-robust localization solutions are validated in two real-life application scenarios: healthcare and underground mining.

KEY ACHIEVEMENTS/RESULTS

A key result is the EVARILOS Benchmarking Handbook which provides a generic benchmarking methodology as well as a set of validated experiment-based benchmarks for localization solutions. The developed public Benchmarking Suite provides opportunities to support the evaluation process of indoor localization solutions; to simplify the use of experimental FIRE facilities; and to allow reuse of EVARILOS research results by a wider scientific community. Open datasets are provided to bootstrap efficient experimentation design and comparison of solutions.

The EVARILOS Open Challenge for the best localization solution took place in 2014. Continuous opportunities for evaluating RF-based indoor localization algorithms and solutions using the EVARILOS methodology and infrastructure are open to anyone from academia and industry, potential users and contributors.

PROJECT FACTS

COORDINATOR: Adam Wolisz, TU Berlin
EXECUTION: From 2012-11-01 to 2015-04-30
PARTNERS: TU Berlin (Germany) (Coordinator), Advantic Sistemas y Servicios (Spain), iMinds (Belgium), SICS Swedish ICT (Sweden), Televic Healthcare (Belgium).

EVARILOS

MORE **INFORMATION:**
www.evarilos.eu

COORDINATION AND SUPPORT ACTIONS

FUSION

The goal of the FUSION project is to bring together SMEs that have requirement needs in testing new applications with the FIRE testbeds. The FIRE facilities, thanks to FUSION will in turn benefit from the specific requirements expressed by those SMEs.

The FUSION project provides an exchange portal (www.sme4fire.eu) where SMEs can easily navigate through a variety of FIRE testbeds which for ease of navigation are divided into six technical categories (Sensor Networks, 5G/Wireless broadband, Cloud/SDN, Fibre, Multimedia and Underwater Communications). FUSION provides a series of engagement activities with either clusters integrating SMEs or directly with SMEs. These engagement activities include discussions of the testbeds capabilities, the SME testing requirements and application market opportunities, to enable collaboration and dissemination of information and also report on their findings. Finally, FUSION will present a roadmap and a series of recommendations for ongoing testing of applications on the facilities. SMEs with inadequate or no testbeds facilities, will not need to spend money developing their own. They can benefit from the expertise of people who have developed and worked on these world-class research facilities.

KEY ACHIEVEMENTS/RESULTS

Throughout the project lifetime, FUSION established the exchange portal (www.sme4fire.eu), documented interviews with nearly 100 SMEs, edited many newsletters with more than 500 subscribers, organised webinars and many events throughout Europe.

PROJECT FACTS

COORDINATOR: Roman Kaurson, JCP-Connect SAS
EXECUTION: From 2013-01-01 to 2015-03-31
PARTNERS: JCP-Connect SAS (France) (Coordinator), Martel (Switzerland), QuartzsPark (Ireland), RedZinc Services (Ireland).

FUSION

MORE **INFORMATION:**
www.sme4fire.eu