



SCOTT Newsletter April 2020



CONTENT

- Preventing train accidents: SCOTT's Trustable Warning System for Critical Areas
- New YouTube video on 5G tesbed using open source software
- SCOTT WP9 promo video – Inviting guests to facilities made simple
- Award for SCOTT's cross-technology communication demonstrator!
- New Whitepaper: Security Scan Methodology for Cloud Connected IoT Devices
- SCOTT approach to indoor localization presented to the biggest translational medicine center in northern Poland
- SCOTT addressing Assisted Living and Community Care System
- Project SCOTT: navigating together through COVID-19 times

Welcome!

This is the April 2020 edition of the SCOTT newsletter, highlighting news & achievements from SCOTT during Q1 2020.

Please distribute this newsletter to all interested parties in your organization. We appreciate your feedback, please send comments or requests to scott@v2c2.at.

Enjoy the reading!



Preventing train accidents: SCOTT's Trustable Warning System for Critical Areas

Jan 7, 2020

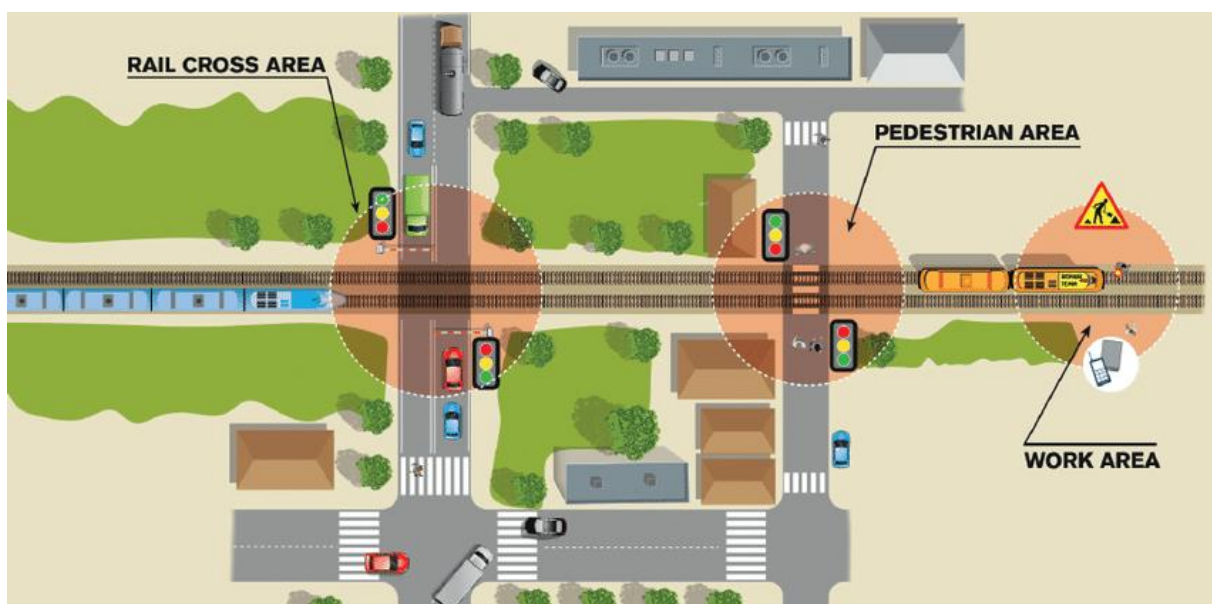
SCOTT UC20 (Trustable Warning System for Critical Areas) aims to reinforce the critical areas in the railway domain, for instance the level crossing or working areas with operators located near the track. In addition, this WP increases the interoperability between the automotive and rail domain. For this purpose, the wireless communications between vehicles to anything (V2X) are implemented, gathering data from different sensors and providing information to external users, such as pedestrians and drivers. An additional target is to link the rail with the automotive domain, as a proposal for the connected car in the future.

Nowadays, the level crossing alert is based on a trigger located on the track, mechanical or electronic, which activate the barriers and signals indicating the approaching of the train and it avoids the occupation of the track by vehicles or pedestrians. This mechanism is limited, due to its incompatibilities with other technologies and its non-flexibility to adapt it to other critical areas, such as working areas. In addition, this system is analogical, and it does not allow any modifications from its initial design and setup, changes due to modifications on the speed or composition. In general, the current systems deployed for the critical areas shows a lack of safety in some situations.

The solution proposed for the UC20 is based on the wireless communication between the train and the critical area. This communication is in both directions, the critical area provides data about the possible track obstacle and the train dynamic information. Taking this data, the system provides safety answer for each situation. On the other hand, the use of wireless connectivity allows its integration with other domains, such as the automotive one.

During the second year of the SCOTT project, the V2X communications have been tested in a real environment at INDRA installations achieving successful results. Moreover, the solution obtained from the UC20 will be tested in a real scenario in Germany.

More information on SCOTT, its technologies developed and publications available can be found in <https://scottproject.eu>.





New YouTube video on 5G testbed using open source software

Jan 27, 2020

Watch our SCOTT demonstrator by Telenor, Wolffia and OsloMet on YouTube! This demonstrator showcases the work in the WP21 (Assisted Living and Community Care) and in the WP24|BB24.L (Adaptable Network Slicing). The video is showing an early 5G testbed using open source software, in which concepts such as network slicing and identity management among others are implemented and also demonstrated how they can be helpful for daily-life situations and types of communities such as the elderly people. The video is available here: <https://youtu.be/4SDFj059AhY>



SCOTT WP9 promo video – Inviting guests to facilities made simple

March 3, 2020

A promo video presents concepts that Vemco is working on in the SCOTT's WP9: Secure Connected Facilities Management. Among these are using a smartphone as an access card and making a process of inviting guests possibly simple by reducing cumbersome formalities. Some of the presented functionalities are or will be demonstrated in other videos on the SCOTT's YT channel. The rest will be developed after the project depending on your feedback that would be highly appreciated! Watch it on our YouTube Channel: <https://youtu.be/vCBJHsXT9Mg>

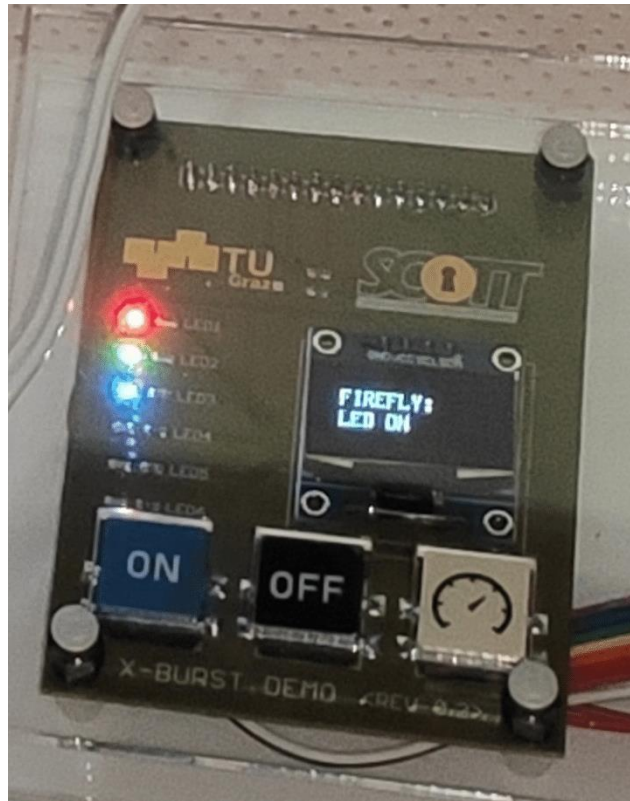


Award for SCOTT's cross-technology communication demonstrator!

March 4, 2020

We are happy to congratulate the team of TU Graz for the best demonstration award at the 17th International Conference on Embedded Wireless Systems and Networks held in Lyon (France) on February 17-19, where they showcased their work on "Cross-Technology Broadcast Communication between Off-The-Shelf Wi-Fi, BLE, and IEEE 802.15.4 Devices" carried out within SCOTT. Specifically, the demonstrator shows how off-the-shelf Wi-Fi, BLE, and IEEE 802.15.4 devices such as the Raspberry Pi 3B+, the TelosB mote, the TI CC2650 Launchpad, and the Zolertia Firefly can broadcast cross-technology frames to each other with an effective throughput above 1 kbps.





EWSN
Lyon, France 2020

17th International Conference on
Embedded Wireless Systems and Networks
17-19 February 2020, Lyon, France

acm In-Cooperation SIGBED

Best Demo Award

CROSS-TECHNOLOGY BROADCAST COMMUNICATION BETWEEN OFF-THE-SHELF
WI-FI, BLE, AND IEEE 802.15.4 DEVICES

Hannah Brunner, Rainer Hofmann, Markus Schuss, Jakob Link, Matthias Hollide,
Carlo Alberto Boano, & Kay Römer


 Prof. C. Julien
 Univ. Texas, Austin, USA


 Prof. F. Valois
 INSA Lyon, France


 Prof. A. Förster
 Univ. Bremen, Germany


 Prof. A. Gallais
 UPHF, France

The demo abstract is available

at: <http://www.carloalbertoboano.com/documents/brunner20ctc.pdf>

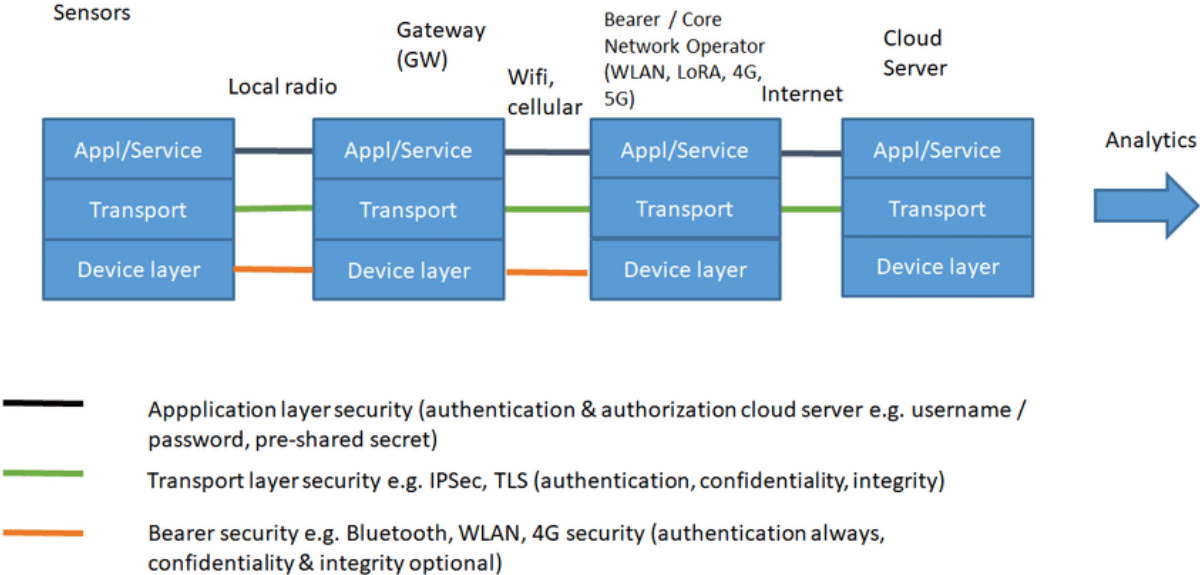
You can find out more information about SCOTT at: <https://scottproject.eu/>



New Whitepaper: Security Scan Methodology for Cloud Connected IoT Devices

March 6, 2020

Within the SCOTT project, the security researchers investigating specifically how to secure connected infrastructures have decided to write a general recommendation methodology for simple good practices. The document, so-called a "Security Scan", is meant to be used as a sort of checklist of basics to ensure that the most common entry points, attack vectors, and typical oversights and mistakes, are avoided and covered. While non-exhaustive and clearly oriented toward the architectures considered in the SCOTT projects, we hope that through following this simple checklist, users of the document (and infrastructure designers) can make sure that their infrastructure and systems are answering the most common security questions and concerns. The Whitepaper is available here: <https://scottproject.eu/download/whitepaper-security-scan-methodology-for-cloud-connected-iot-devices/>



Learn more about SCOTT using <https://scottproject.eu/>



SCOTT approach to indoor localization presented to the biggest translational medicine center in northern Poland

March 9, 2020

An Indoor localization system developed by GUT within SCOTT project was presented on 21st of February during the annual meeting of specialists working in the area of translational medicine in Gdansk. Over 150 specialists from different fields of medicine, biology, biotechnology, pharmacy and chemistry, that work together in the biggest translational medicine center in northern Poland, discussed relevant new preclinical research and disease-targeted research outcomes, that can be used to develop new methods to improve human health and longevity. During the meeting, Lukasz Kulas presented indoor localization system and also SCOTT methodology that can be used to set different privacy and security levels in different instances of the system. Presented achievements gained a lot of attention from translational medicine specialists - as the system can be used to support different needs with different privacy levels. When the system supports management of medical samples and organs for transplantation the privacy level can be low to better focus on safety and time-relevant issues. But when the system will be used to provide safety to elderly patients the privacy level will be higher to protect patient's privacy and, as a consequence, higher acceptance of the system.

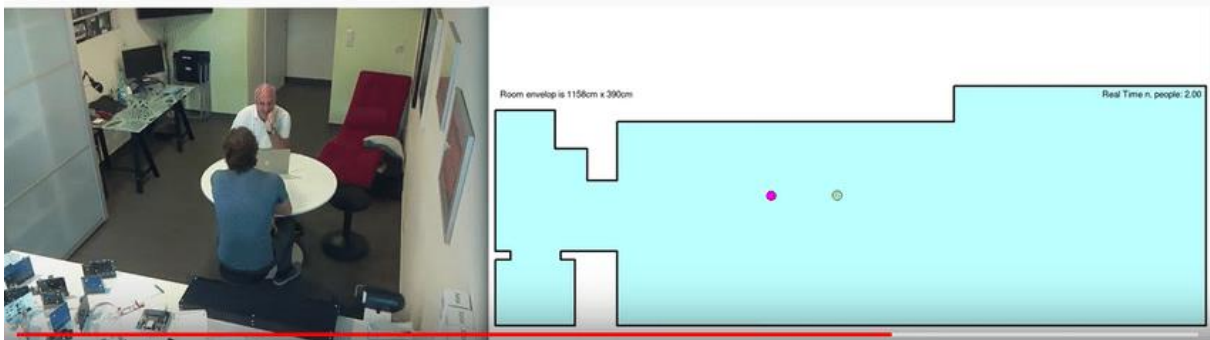
Find out more about SCOTT at <https://scottproject.eu/>



SCOTT addressing Assisted Living and Community Care System

March 10, 2020

Given that the share of elderly people in Europe continues to increase there will be a growing need for smart and secure monitoring systems in order to provide high quality elderly care without increasing costs by an effective use of caregiver resources. The (WP21) Assisted Living and Community Care System provides an integrated solution for monitoring patients or elderly, signaling alarms to available caregivers and allowing them to enter the house or apartment for giving care (only) when needed. An integrated ALCCS demonstrator for elderly monitoring and caregiver notification in case of emergency events was build and tested by various SCOTT partners.



One of the sensors used for monitoring in this demonstrator is a presence sensor by Xetal/Yugen (see <https://youtu.be/5rNn8zA25Dk> for more information) that has been tested and matured with support from the SCOTT project and which is now ready for commercial application.



Project SCOTT: navigating together through COVID-19 times

March 27, 2020

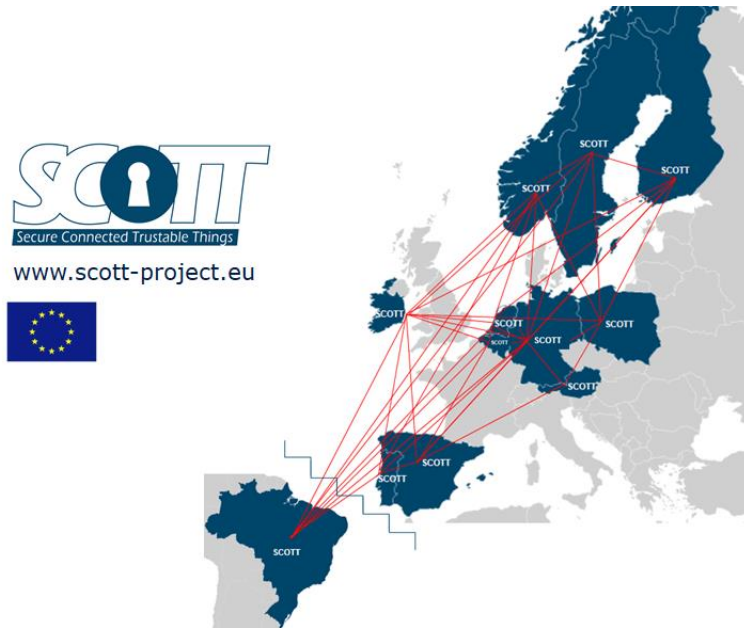
Our sincere thanks go to all those who are helping to master the great challenges of the current crisis: whether in the health sector, public service, or simply in helping others.

Many of us need to stay at home, having to balance family life and work within new constraints. We work from remote, and try to take care via distance for our loved ones. Many of us rely on the Internet now even more than ever.

Digitization is a big help, allowing us to do so much, more and more, location-independent.

Spotlight on secure, connected and trustable things - this is exactly the vision SCOTT has started with about 3 years ago. For example, support caring for elderly people while travel restrictions are imposed in such times of crises: see the recent post on Assisted Living and Community Care (<https://www.researchgate.net/project/SCOTT-Secure-Connected-Trustable-Things/update/5e67455f3843b0499fee82a7>).

SCOTT contributes in many ways, serving with safe, secure and trustable solutions at home, mobility and helping to run industrial facilities. We aim to show this at our final event and market place, with many demonstrators across a variety of use cases.



This final event was now rescheduled to week 40 (last week in September) and will take place in Graz, Austria.

Stay safe!

