CHIST-ERA Call 2015

Project: SUCCESS

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Summary:
The IoT has a great potential to provide novel services to humans in critical areas for society. This innovation, however, requires updating our understanding of the risks associated with the new technology so that we can deploy it with confidence and society can trust it. Amongst the biggest problems for this vision to become a reality are security flaws, due to technical restrictions, immaturity of software applications, intrusion threats through new challenges in complex usage scenarios, and mainly a lack of transparency. The main trigger for security problems is human behaviour, either unintentionally or maliciously. The core idea of SUCCESS is to use formal methods and verification tools with a proven track record to provide more transparency of security risks for people in given IoT scenarios.
Our core scientific innovation will consist on the extension of well-known industry-strength Methods. Our technological innovation will provide adequate tools to address risk assessment and adaptivity within IoT in healthcare environments and an open source repository to foster future reuse, extension and progress in this area.
Our project will validate the scientific and technological innovation through pilots, one of which will be in collaboration with a hospital and will allow all stakeholders (e.g. physicians, hospital technicians, patients and relatives) to enjoy a safer system capable to appropriately handle highly sensitive information on vulnerable people while making security and privacy risks understandable and secure solutions accessible.
This innovation will be achieved by a multi-disciplinary team of recognized experts in their fields which has significant experience in knowledge transfer to and from society.
SUCCESS will have significant impact, strengthening the interdisciplinary approach to this important challenge at the crossroads between society and technology, creating new methods for increased security in healthcare, supporting the use of these robust methods by adequate open-source tools, and educating on the use of our products through real-life working prototypes.