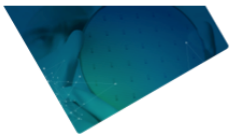
PRESS RELEASE



SunRISE project develops new approach to IoT security based on machine learning and trusted data sharing

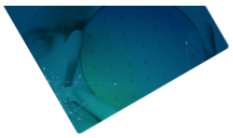
A project within the EUREKA PENTA programme

Paris, 12 November 2019 - SunRISE, a project in the EUREKA PENTA Cluster and managed by industry association AENEAS, aims to transform Internet of Things (IoT) security through machine learning and data sharing. Existing IoT security is limited by proprietary solutions and standards, and an unwillingness of companies to share sensitive data related to security incidents. In contrast, SunRISE's platform approach is based on privacy enhancing technologies (PETs) that create trust in data sharing. As a result, vast amounts of data on security incidents will be available for machine learning, with the analysis feeding into a complete security chain. Innovative technologies and reference platforms will establish trusted identities and end-to-end security for IoT devices. They will securely manage devices over their entire lifetime, enable data sharing to detect anomalous behaviour and network intrusions, and recover devices to a secure state once a security issue has been detected.

The innovations delivered by SunRISE will have major importance as IoT systems are increasingly used in critical economic and social domains including Industry 4.0, automotive, energy and healthcare. By 2025, the annual economic impact of IoT is expected to be between USD 4 trillion and USD 11.0 trillion worldwide[1]. However, this interconnectedness brings risks of data manipulation, data theft and cyberattack. For instance, in 2015, European enterprises had at least a 1 in 5 chance of losing data through a targeted cyberattack. Such attacks pose financial and reputational threats; they may endanger privacy and even human lives.

SunRISE is addressing fundamental technical challenges to tackle these security issues. Firstly, it will implement machine learning and security incident management on edge nodes (i.e. where IoT devices connect to the cloud, not in the cloud). This ensures that decisions on how to handle incidents can be made in real-time – essential for time critical applications such as autonomous driving. Secondly, it will develop PETs, particularly homomorphic encryption (a new technique that ensures no data needs to be shared in plain text), so companies feel confident to share security incident related data on a cloud-platform. This is a vital step in allowing the benefits of machine learning to be applied to evolving IoT security risks. Thirdly, SunRISE will develop new manufacturing technologies for low-cost, high-volume, secure ASICs (dedicated semiconductor chips) both for machine learning acceleration and for unique identification of individual devices.

[1] https://www.mckinsey.com/industries/semiconductors/our-insights/whats-new-with-the-internet-of-things of May 2017



The SunRISE consortium comprises 17 industry-leading partners including large enterprises, SMEs, and 6 academic and research institutions. It will also engage with standards bodies and application owners in fields such as smart grids, industry and eHealth, as well as with leading providers of secure ICs and sensors, security, and AI and machine learning technologies. The resulting technologies, guidelines and hardware for IoT security and privacy, will allow Europe to reinforce and expand its leading market position in cybersecurity solutions.

About the PENTA programme (managed by the AENEAS Industrial Association)

PENTA is a EUREKA cluster whose purpose is to catalyse research, development and innovation in areas of micro and nanoelectronics enabled systems and applications - where there is shared national and industrial interest. Based on the Electronic Components & Systems (ECS) Strategic Research Agenda (SRA) key areas and essential capabilities, PENTA programme contributes to the development of electronic solutions with the opportunity for rapid competitive exploitation and a strong impact on European societal challenges. The PENTA project team is supporting SMEs, large corporations, research organisations and universities by facilitating access to funding, fostering collaborative work and creating consortia.

PENTA is managed by AENEAS.
More on PENTA: http://www.penta-eureka.eu
More on AENEAS: https://aeneas-office.org

About SunRISE

SunRISE is a RD&I project consortium involving 17 partners from 3 countries. The project partners are: NXP Semiconductors Germany GmbH (project leader), Ancud IT Beratung GmbH, AnyWi Technologies, Cloud&Heat Technologies GmbH, Delft University of Technology, Eindhoven University of Technology, ENGIE – Laborelec, Fraunhofer IIS/EAS, Sandgrain, NXP Semiconductors Belgium NV, Philips Electronics Nederland B.V, Philips Medical Systems, SIRRIS HET COLLECTIEF CENTRUM VAN DE TECHNOLOGISCHE INDUSTRIE, Stichting IMEC Nederland, Technical University of Munich, Technolution BV and University of Ulm.

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