

PSCE WHITE PAPER 4

Security and interoperability in next generation PPDR: Security Architecture, end-to-end security, privacy mechanisms and intrusion detection approach

Source: SALUS project



PSCE: Future of public safety communications

This document is based on SALUS deliverable D5.2, which describes the components and interfaces for the interim SALUS Security and Privacy Architecture considering possible roadmaps for the evolution of PPDR networks.

This description also includes interim solutions for security services such as security extensions for seamless mobility, end-to-end security and privacy support for interoperable PPDR communication systems, techniques for flow based intrusion detection - including forensics -, wireless sensor network security and localization privacy. Since SALUS also deals with security at the physical layer, this deliverable also describes the current achievements on propagation modelling for wireless communication channels.

The document is organized as follows. Section 1 presents the medium and long-term PPDR operating scenarios, which are grouped in three main phases/migration scenarios: phase 1 – non-mission critical cooperation with commercial LTE; phase 2 – PPDR organisations as mobile virtual network operators, and phase 3 – PPDR organisations as owners of broadband (LTE) network;

Section 2 presents the SALUS Security and Privacy Architecture, which identifies components, interfaces and services needed to assure integrity, confidentiality, authentication, intrusion detection and location privacy for PPDR communications over the SALUS platform. Section 3 describes the SALUS security approaches for secure handovers between LTE and Wi-Fi networks, secure wireless body area networks, intrusion detection and security at the physical layer, which mainly focus on modelling the wireless channel in crowd environments towards a reliable communication channel. Section 4 presents the concluding remarks and next steps.

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https://www.sec-salus.eu/wp-content/uploads/2014/05/SALUS_D5.2_v1.31.pdf

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