

Pufs: Anchors of Trust in Resource constrained environments

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Abstract

We would like to introduce you to our research and development efforts within the EUREKA Eurostars project **PATRIOT - Pufs: Anchors of Trust in Resource Constrained Environments**. PATRIOT started in October 2015, targeting on a high level of security on resource constrained devices, using SRAM-PUF components as Root of Trust that are ubiquitous in all smart electronics. The main challenges of PATRIOT include the severe threat model of the IoT/resource constrained devices since they are often used in safety critical infrastructures, vehicles, and patients with implants. Further the challenge is to cope with the limited resources of these devices. Systems like medical implants or smart sensors need to be low-power, low footprint and low-cost. Typical constraints include absence of non-volatile memories (NVM), lack of memory protection, low CPU speed, battery capacity and small form factor requirements. PATRIOT involved partners are Intrinsic-ID, the Netherlands, Technical University of Eindhoven, the Netherlands, and Technikon Forschungs- und Planungsgesellschaft mbH, Austria.