Internet Technologies and Systems
Prof. Dr. Christoph Meinel
Research Group Secure Identity Lab
Bachelor Project Winter Term 2018/19

Hasso Plattner Institut
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Behavioral Authentication

Background

Our on-going research proved that people can be authenticated based on their movement while walking. NeXenio (HPI spin-off) provides a system that calculates a trust level based on these movements. The system shall be applied to enable interaction-less access control for office buildings allowing employees to just walk in: no key, no card, no hassle.

Problem

The challenge we like to tackle in the bachelor project is to create an access management platform for those office buildings. We enable property managers to manage assets (doors, resources), users, and devices (apps). Even more challenging is how we can combine behavioral trust levels from our authentication techniques to a more abstract trust level used for access control. Any property manager needs to configure those levels for each possible point of access and has to decide in terms of the security versus usability tradeoff.

Goal

In this project, you will design a complex application architecture including frontend, backend and the interfaces towards the apps running on the end user's devices and the access gates in the buildings. Furthermore, you will research how to configure and implement lockout criteria that decrease the overall trust.

Supervisors

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