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Security in the FLASH-MAS framework

Deploying a multi-agent system in real-life, formed of heterogeneous agents developed by different parties, requires a mechanism for authentication, authorization, and secure messaging between agents.

This subject relies on a large existing project for a MAS framework (FLASH stands for Fast and Lightweight Agent Shell), in which distributed deployment, flexible communication and interoperability of various platforms is already integrated. The goal of this subject is to integrate authentication, authorization and security into FLASH-MAS.

Complex MAS Deployment with FLASH-MAS

This subject relies on a large existing project for a MAS framework (FLASH stands for Fast and Lightweight Agent Shell), in which distributed deployment, flexible communication and interoperability of various platforms is already integrated, but insufficiently tested and real-life-proven.

The goal of this subject is to create complex scenarios for deploying the framework in a distributed system, integrating PCs, Android devices, Raspberry Pi devices, and cloud setups. These scenarios should be run, monitored, analyzed, and compared against running similar setups deployed with other MAS frameworks.

Estimating waiting time at the faculty cafeteria

Based on previous work done, we wish to use an inexpensive setup to capture low-resolution photos of the queue at the cafeteria and estimate the waiting time for a person who would join the queue at the present time. The estimation is based on current queue dynamic parameters, number of people in the queue, and historical data on waiting times and queue dynamics.