Project Topic: Reliable wireless user authentication in a crane control system

The ITEA project OPTIMUM develops an architecture for semi-autonomous control functions of cranes. Within the project, the existing wireless crane control systems of the project partner DEMAG will be supplemented with smartphone-like extensions to enable the new functionalities. Part of this development is the design of a reliable authentication of the crane operator by means of the extended remote control. The crane operator carries a localization system on his body. A reliable and wireless communication needs to be established between the localization device and the remote control, enabling the authentication of the crane operator.

The following subtasks shall be completed:

- Examination of the state of the art for (robust) wireless communication protocols
- Implementation of a user authentication prototype with various appropriate protocols using a Raspberry Pi and Smartphone
- Comparison of the protocols with respect to the planned application based on technical specifications and results of the prototype investigation

Requirements

Linux Shell Scripting, (Programming Skills in C and Python)

 Supervisor

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