An RFID Reader Network Based on SOAP

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Abstract

This paper describes an RFID reader network system that is based on the open SOAP protocol. It mainly comprises one or more RFID reader devices, a control server and one or more applications. The components communicate with each other through so called SOAP messages which are transferred over the http(s) standard protocol. These messages are coded by using a specific XML format, and contain commands or other information (parameters, status, etc.). Many different kinds of reader devices (LF-, HF-, UHF-RFID) can be connected to the network, even others than RFID readers like active sensor devices. The control server is the central device in the network and can be implemented on standard PC hardware or embedded in a microcontroller system. It manages the communication within the network. All applications and readers link to the control server. The applications control and access the readers, e.g. they execute available reader functions, store collected data or provide an user interface.