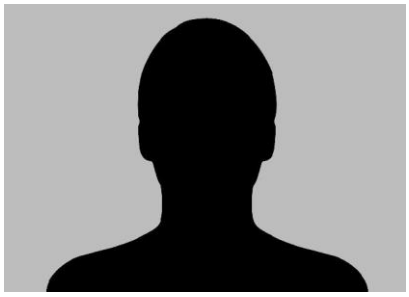
Zurich University
of Applied Sciences

School of Engineering

InES Institute of Embedded Systems

Communication Server for On-Board-Unit (OBU) - OBU Registration and Management Application



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The company FELA Management AG (FELA) features CarLoc to trace the position of vehicles with On-Board-Units (OBUs). In 2020, FELA has taken the decision to purchase foreign OBUs rather than producing them themselves. A prototype of an application for registering and managing such foreign OBUs has been designed and implemented. It makes use of the standardized interface Flespi which simplifies managing and tracking OBUs. The creation of the currently presented advanced version, which meets customer demands by using the interface Azure, includes four steps. The first step focuses on the development of automatic registration using Flespi and Azure. Then the process concentrates on the OBU management through Azure IoT Hub. As the most prominent of the four steps taken, the developed functionalities are verified by two test OBUs, one for Flespi and one for Azure. At last, the application is being merged together with an existing FELA demo application. The advanced application allows for automatic registration of foreign OBUs and, in addition, the management of OBUs through Azure IoT Hub is enabled. It meets all functionality requirements.

OBU Registration

OBU Management