INDUSTRIE 4.0 DEMONSTRATOR: SENSOR DATA ON IoT PLATFORM

Application for the manufacturing industry - illustrating the administration shell in the environment of sensor data managed on an IoT platform

SUMMARY

The project illustrates a business scenario in which a sensor manufacturer offers its portfolio with extended connectivity capabilities. The sensor can be connected to an IoT platform and the sensor data can be analyzed to optimize a production process.

CURRENT SITUATION

The project uses the Industrie 4.0 Demonstrator, which was equipped with additional Schmersal sensors and implemented basic concepts of the administration shell of the Industrie 4.0 platform. These are basic concepts, characteristic value statements and lifecycle entries in conjunction with a standardized classification of feature such as eCl@ss.

PROJECT DESCRIPTION

A value-added network consisting of the following business partners implemented the project:

Sensor manufacturer: This company provides new connectivity properties in its sensors, making them easier to connect to an IoT platform. This is Schmersal’s role in the project.

Machine user: This company demands more transparency in its production, for example end-to-end tracking of product information. It connects its machines to an IoT platform and uses a software application to optimize its production process. The software application was created by evosoft.

IoT platform provider: This company provides an IoT platform with which data from connected assets can be collected, managed and analyzed. Siemens AG fulfills this role with MindSphere.

SCHMERSAL door monitoring sensors were added to the Industrie 4.0 Demonstrator. The sensor information is transmitted to Siemens MindSphere. Exploiting the options offered by MindSphere, a software application was developed that links sensor information with information in a quality management system.

Typical application logic in this software application is as follows: If the door monitored by the sensor opens, all bottles on the production line are marked as not being in compliance with the quality requirements.

CONTACT

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INDUSTRIE 4.0 – FEATURES

Concepts concerning characteristic value statements and lifecycle entries as part of the administration shell are shown with standardized description schemes such as eCl@ss.

STANDARDIZATION APPROACHES

The project follows the recommendations of the DIN “Characteristic value statements” specification project.