

Mobility Division

MindSphere

- MindSphere is the open, cloud-based Internet of Things (IoT) operating system from Siemens that connects devices, machines and physical infrastructure to the digital world.
- Based on MindSphere the Mobility Division has developed a specialized and innovative connectivity solution consisting of hardware and software to securely transmit data from safety-critical rail infrastructure to the IoT via a unidirectional data flow.
- This solution opens up a new dimension of data, enabling it to be turned into insights that help improve the availability and operational performance of railways.
- In Germany, some 260,000 field elements could potentially be connected to the IoT. Half of them are already connected to electronic interlocking systems. This way, Siemens could reach all frequently used rail lines in Germany.

Use case Atlanta Streetcar

- In April 2017, Siemens opened its third Mobility Data Services Center in Atlanta, USA.
- It's a Competence Center for light rail vehicles and will help transport providers utilize big data to increase availability and to maximize the operational efficiency of their fleets.
- One project has been initiated for Atlanta Streetcar: The technical scope is to win insights into individual vehicle and operator performance, ridership analysis, the identification of statistical outliers, increased asset lifetime and information on energy consumption (location & vehicle).

Use case VAG Verkehrs-Aktiengesellschaft Nuremberg

- Together with the German operator VAG Nuremberg, Siemens is setting up a pilot project to provide continuous cyber security monitoring of network traffic for rail systems with the objective of promptly detecting intrusions or anomalies.
- Data will be securely captured in a unidirectional flow for monitoring purposes. Our customers will benefit from a continuous overview of the security status of their operational technology (OT) in the system's operations and control system.
- In this project, Siemens experts with combined IT security and rail-specific domain know-how monitor the network traffic.

Further information

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