

A first for Germany: Siemens and Rostocker Straßenbahn AG start trial operations of Signaling X for urban transit

- **Siemens Mobility and Rostocker Straßenbahn AG are piloting Signaling X in urban public transport**
- **Following successful tests in Singapore, the system is now making its debut in Germany's urban rail transit**
- **Modern safety platform and standard hardware provide the foundation for efficient, centralized maintenance and future-proof digitalization**

Together with Rostocker Straßenbahn AG (RSAG), Siemens Mobility is setting new standards for the future of rail signaling. As part of a pioneering pilot project, the innovative Signaling X platform is being trialed for the first time in German public transport. A software-defined interlocking based on our DS3 safety platform and standard IT hardware has been implemented for the tunnel section under Rostock Central Station, serving tram lines 2, 3, 5, and 6. The project exemplifies the shift from proprietary hardware solutions to a software-based system, enabling existing infrastructure to be modernized more easily, flexibly, and efficiently. This approach forms the technological foundation for the next generation of digital interlockings. Following successful tests at the Singapore Rail Test Center last autumn, this project marks the next major milestone: testing in a real-world operational environment.

“Today marks a milestone in the digitalization of rail transport. With Signaling X, we are opening a new chapter in rail signaling. For the first time, we are deploying our new generation of software-defined signaling technology in a real-world urban operational environment. This creates the foundation for faster innovation cycles,

simpler system modernization, and even more efficient long-term operations. The pragmatic, professional, and forward-looking collaboration with Rostocker Straßenbahn AG was key to this success,” said **Marc Ludwig, CEO Rail Infrastructure at Siemens Mobility.**

“For mass transit operators, operational safety is the greatest challenge. In addition to the inherent risks of rail operations, the proximity to road traffic creates additional stress for both people and technology. We are therefore pleased to support any innovation that advances operational safety. It was a natural choice for us to work with our partner on the testing and implementation of this technology,” said **Dirk Glauner, Team Lead Railway Power Systems at Rostocker Straßenbahn AG.**

Signaling X as the technological foundation for next-generation rail signaling

Signaling X forms the technological basis for the digital transformation of rail infrastructure at Siemens Mobility. The core of the architecture lies in the consistent decoupling of software and hardware: safety-critical interlocking logic is detached from the proprietary specialized components previously required and is instead operated on high-performance standard IT (Commercial Off-The-Shelf, or COTS).

This paradigm shift allows operators to modernize and scale their infrastructure independently of specific hardware lifecycles. Maintenance is simplified, and spare parts management becomes more efficient by leveraging globally available IT standards. The technical foundation is the DS3 (Distributed Smart Safe System) safety platform, introduced in 2020. It creates a highly available, redundant environment in which safety-critical applications meet the highest requirements according to CENELEC SIL 4 on standard (COTS) servers. The deployment in Rostock now demonstrates for the first time the practical implementation of this future-oriented architecture in a complex urban operational environment. This also includes ensuring the highest cybersecurity standards for the operation of critical infrastructure.

This press release as well as press pictures / further material are available at <https://sie.ag/31DnY8>

Contact for journalists:

Moritz Krause

Phone: +49 162 3480575; E-Mail: moritz.krause@siemens.com

Claas Belling

Phone: +49 173 6901586; E-Mail: claas.belling@siemens.com

For further information about Siemens Mobility, please see

www.siemens.com/mobility

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