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FLEXIBLE AND COST EFFECTIVE INTERLOCKING SOLUTION

Trackguard Simis Interlocking as a Service (SlaaS)

A big milestone towards the interlocking “in the cloud”

The conventional interlocking architecture consists of electronic components inside a technical room, physically placed next to the rail infrastructure. The outdoor elements – signal, points, axle counter, etc. are controlled from this room. This type of architecture and communication present physical restrictions depending on the material used (mainly cable length), significantly increasing costs and complexity of the railway infrastructure projects. The SlaaS concept is the first solution worldwide where the interlocking central unit is no longer located next to the outdoor elements and supervised by the railway infrastructure manager, but hosted at Siemens.

Redundant and encrypted open data network for highest availability and security

The outdoor elements receive the interlocking information through the Ethernet standard via public telecom data network. The required high level of availability is ensured by means of a redundant virtual private network (VPN) tunnel. This ensures that, in case of a failure in communication, the interlocking data exchange continues uninterrupted.

In order to avoid cyberattacks, the data network between Siemens and the railway infrastructure installation is secured both at the beginning and end of the network with state-of-the-art encryption technology (crypto boxes). This technology fulfills both the IT requirements and the governmental railway safety guidelines.

Flexible interlocking solution reduces project complexity

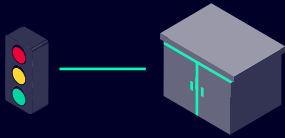
The SlaaS architecture is possible thanks to the innovative outdoor cabinet, which provides a maximum decentralized architecture. Neither building nor technical rooms are needed anymore, significantly reducing both the hardware costs and the complexity of such an installation. This results in an infrastructure project planning much more flexible and less complex. The railway infrastructure manager can focus on the maintenance of the outdoor elements, while Siemens maintains the indoor equipment and is in charge of their obsolescence management. In case of a disturbance, the problem can be directly solved at Siemens.

SIEMENS

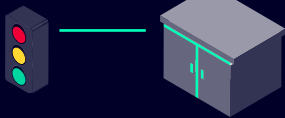
Architecture

Customer installation

Outdoor elements Outdoor ECC cabinet

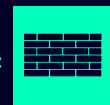


Outdoor elements Outdoor ECC cabinet



SWITCH...

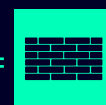
Interlocking switch



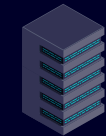
Cryptobox



Redundant, safe and encrypted data network

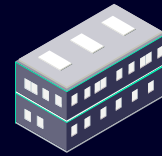


Cryptobox



Interlocking central unit

Siemens data center/host



Siemens

SIEMENS

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Order No. MORI-B10012-00-7600

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