

## POSSonline Release 6.0

### Total concept for Rail Asset Condition Monitoring

POSSonline Release 6.0 is the obvious platform to monitor the condition of rail assets. It is a comprehensive concept for preventive maintenance, including the automated collection and central registration of data and continuous comparison of the actual measurements to the desired situation. It continuously informs maintenance teams about the real-time situation and provides alerts in situations that require immediate attention. This enables POSS users to prevent failures. The automation of inspections reduces costly inspections along the track and increases the quality. POSS users can therefore prove that they are ‘in control’ of their infrastructure.

Based on years of experience with POSS systems worldwide, Strukton has revised the entire product architecture. Lessons learned have become generally available to all users. At the same time, the POSSonline product has been restructured in generic components.

#### The benefits

- Ease-of-use because of the familiar internet user interface to all components
- Robust system because of a limited set of generic components
- Faster realisation and installation of new monitoring applications
- Lower costs

#### Components

The POSSonline R6.0 product contains the following (new) components:

#### MicroPOSS data logger v2.1 – universal data logger

Small enough to be installed in relay cabinets, scalable to grow big enough to monitor the biggest relay rooms. Capable to monitor both AC and DC point machines, and

able to handle 9 analogue and 27 digital signals. The data logger is designed to meet railway environment conditions; its robustness therefore allows operation in harsh environments. The high level of integration reduces maintenance costs and reduces the risk of failure to a minimum. The daily operation of your decentralised data loggers is monitored by Strukton Systems via a remote interface, bringing the user peace of mind.

#### POSS Message Broker v1.0 – open interfaces

This internal postman within the POSSonline product is responsible for reliable message handling between the POSS components. At the same time, this component offers the possibility to translate messages to open standards and facilitates the integration of POSSonline with external applications, such as asset management systems en incident handling systems. The POSS Message Broker is also able to translate POSS alarms en notifications into SMS alerts or e-mails, depending on the individual demands of the users.



**Strukton**  
Systems

## POSS Information Platform v1.0 – information access wherever you are

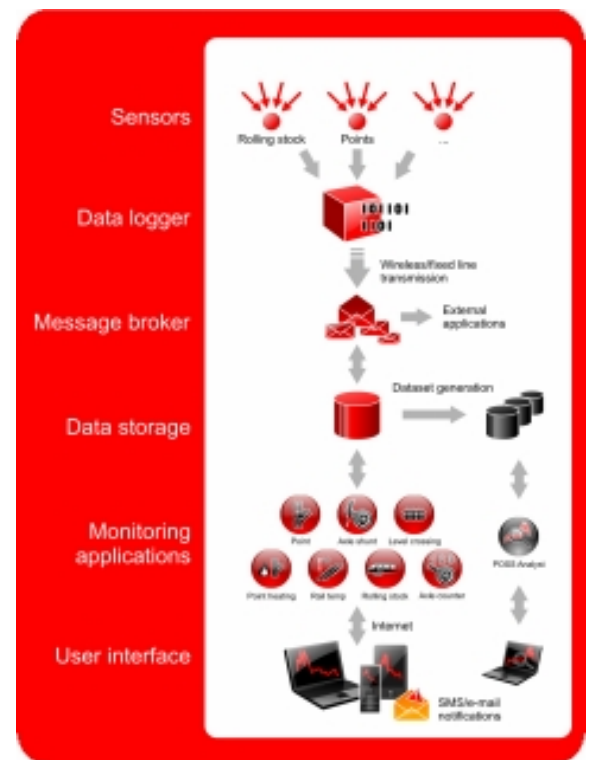
The POSS Information Platform (PIP) is a web portal based on the latest technologies, providing a general user interface to all POSS online monitoring applications. It provides general functionalities including:

- Central data storage and management
- User management, access control and authorisation
- Central management of decentralised data loggers (operations & maintenance)
- Graphical user interface for all condition monitoring applications, accessible through the internet
- Management information en reporting facilities

The introduction of PIP will lead to the migration of existing POSSonline monitoring applications to this new platform. The following applications will become available in the short term:

- **POSS point monitoring v2.0:** The well-known application for preventive maintenance and quality control of points has been completely renewed and includes: support for various types of points, online analysis of point measurements and quality reports to management
- **POSS level crossing monitoring v1.0:** A new application that makes unsafe situations at level crossings transparent. The application does so by logging the following events: Total closure times of the level crossing, time it takes for trains to approach the crossing, opening times of the level-crossing bars, free periods en power failures of the crossing
- **Track circuits and wheel shunt v1.0:** This application is used to monitor the electrical resistance of the superstructure under all kinds of weather conditions. The application also monitors the train detection
- **Rail temperature and point heating v1.0:** This application helps to prevent buckling of rail and freezing of points. Innovative wireless sensors reduce installation costs
- **POSS Analyst v1.0:** This is a new application to perform ‘What-if’ analyses on large data sets with historical measurement data

The below figure shows the POSS solution architecture and visualises how the POSS components are connected to one another.



POSS Solution Architecture

## Renewal of services

The POSSonline product includes a set of services that ensure the product to provide solutions. The strong international growth of POSSonline has enabled Strukton to improve some of these services:

**POSS helpdesk:** A central internet access is provided for all support requests. The POSS helpdesk service is based on the international ITIL v2 process standard of

**POSS hosting:** POSSonline R6 has been installed in a data centre providing 24/7 high-speed access worldwide. This external data centre complies to the latest environmental quality standards

**POSS consultancy:** Good products are important, but Strukton’s knowledge and experience can bring POSS users much further in improving their maintenance process. The POSS consultancy service provides access to the knowledge and experience available within the Strukton organisation in Europe in the field of preventive maintenance