

Client

ProRail (www.prorail.nl)

Country

The Netherlands

Location

Country wide

Delivery date

2004

Contract sum

1 to 5 million EUR

Project summary

Condition monitoring of

- 1.300 point machines
- Data communication over GSM-R
- Real time access to the information by web interfacing
- Installation of hardware and software
- Commissioning and testing
- Maintenance management

POSS Dutch Railways

The Dutch Railway Network in Europe has a very high traffic density. The track length is almost 3000 km of which more than 2000 km is multiple track.

The volume of passenger transport per kilometre track is 5 mill. passenger-kilometres. The EU average is 1.8 mill. The Dutch Railway provider is ProRail and is based in Utrecht.

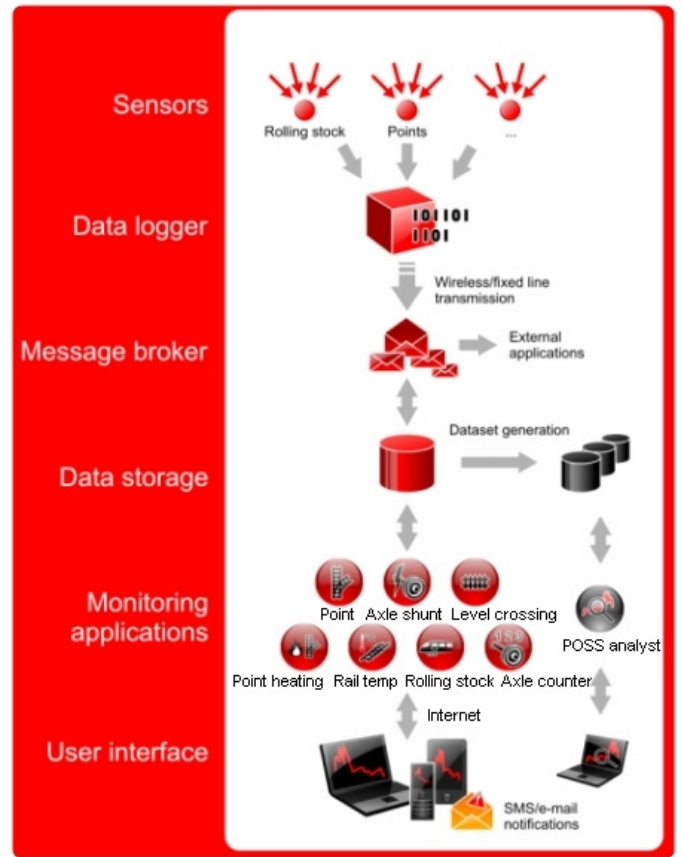
The maintenance of the railway network is contracted to 4 maintenance companies, of which Strukton Rail is the largest with a market share of 50%. By the end of the nineteen nineties point failures were one of the main reasons for train delays. To tackle this problem, Strukton Rail developed from 1999 a point monitoring system known under the name POSS. Several tests showed that a fault reduction of 40% possible. This success led to a country wide roll out of POSS in 2003/2004 with over 1.300 points at 100 stations and junctions. All 4 maintenance contractors use the system now on a 24/7 basis.



The following point machines are used at the Dutch Railways:

- Electromechanical: Vialis NSE 136 VDC
- Electromechanical: Siemens S700 136 VDC
- Solid state controlled: Bombardier EBI switch 136 VDC and 220 VAC

The POSS system is guaranteed non-intrusive. The point motor current is measured by high quality current clamps and is processed in a data logger which meets all EMC specifications for use in EU railways. Over the GSM-R network of ProRail the data is sent to a sophisticated server system at the Strukton Rail head office in Utrecht. The flexible and modular software allows specific solutions for each customer. Maintenance and fault teams have easy access to POSS via a web interface on their PC or Blackberry.



Since 2004 POSS is gradually extended to other railway assets in the Netherlands:

- Axle counters. All rural lines in the north of the Netherlands and the so called “Maaslijn” are equipped with POSS axle counter monitoring
- 28 level crossings are being monitored on their closing time
- Rail temperature measurement, an important tool to prevent “buckling” of the rails
- Track circuit monitoring and axle shunt measurement
- Intelligent video processing for level crossings
- Customized measurement projects for the high speed line

For more information please contact:

Gerrit Nieuwenhuis +31 (0)6 27070526. E-mail: gerrit.nieuwenhuis@strukton.com

Rob Redeker +31 (0)6 53178047. E-mail: rob.redeker@strukton.com



Welbergweg 60, 7556 PE Hengelo, PO Box 258, 7550 AG Hengelo, The Netherlands.

Phone +31 (0)74 255 88 00. Fax +31 (0)74 255 88 01. E-mail: info@struktonrail.com.