

# railwaysolution railwaysolution **Railwaysolution** railwaysolution

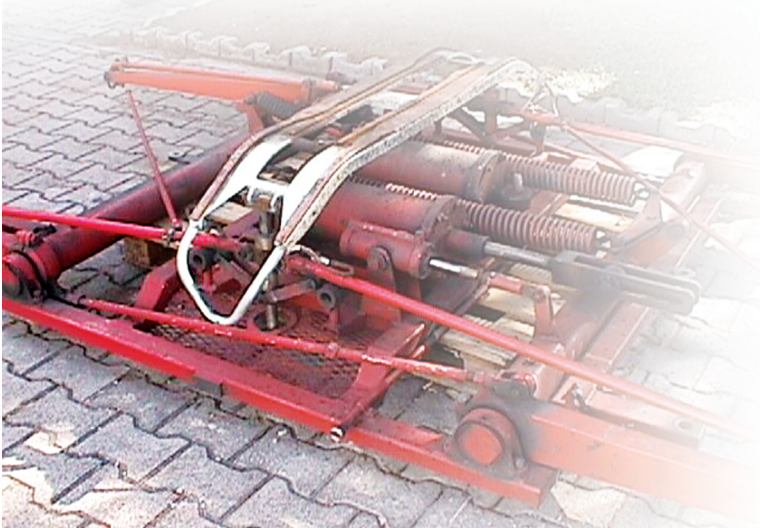


## overview

Railway systems have to cope with ever-changing data in their maintenance programs and precise inventories of all materials and rolling components. This is crucial for the safety working conditions and the optimal performance of every static and moving part.

Although railway systems have undergone enormous changes and modernisation through the years, maintenance programs still rely on an enormous amount of information on paper, which is then manually fed in computers for further processing and analysis in control centres.

Gathering data manually and the subsequent data-entry in computers though, leaves itself open to misalignment and delays in the information, and prevents any maintenance program from an efficient and immediate use of such data.



## our answer

At **Our Company**, after years of research, we have identified an array of limiting factors that hindrance maintenance programs.

**Our Company**, through its international exchanges with other partners, has developed a healthy cooperation among manufactures and maintenance staff of railway carriages and locomotives, on metal or rubber wheels.

**Our Company** can offer successful [maintenance procedures](#) to counteract the limiting factors in the present maintenance processes.

Key to the flexibility, speed and accuracy of our solutions is the introduction of the **Smart Point®**.

**Smart Point®** is identification by contact technology. It uses miniaturised memory buttons, specifically developed for extreme environments, and applied directly on each static component or rolling components requiring maintenance monitoring.

This technology provides incontrovertible identification as well as up-to-date and immediate access to the unique data referring to the specific component. The resulting improvement in data management will allow immediate access to all details of past and future maintenance, when it was carried out and by whom.

All this data of course, is already in digital form, avoiding the subsequent bottleneck stage of data-entry and ensuring an immediate alignment between data gathering in the field and the database in the processing centre.

railwaysolution  
railwaysolution  
railwaysolution  
railwaysolution  
railwaysolution



## railwaysolution

**Our Company** has identified several applications in maintenance programs for railway systems, from train carriages to static structures and for 1<sup>st</sup> level maintenance. Here are some examples:

monitoring oil change and oil levels in reducing gear; maintenance wheel-sets; etc.

A **Smart Point**<sup>®</sup> on the reducing gear keeps a record of every refill or oil substitution with the relative date and mileage from the previous check.

The non-changeable field of the read-out will contain the unique identification of the reducing gear, its identification number and the carriage identification.

Monitoring the wear of contact strips on Pantographs; monitoring Braking system; etc.

The **Smart Point**<sup>®</sup> applied on the pantograph or on the braking system keeps a record on past and future checks for wear and substitution, mileage, date and name of operator, etc.

Visual Inspection of the iron and concrete bridges

The operator in charge of checking the bridge writes his/her report on the handheld computer and then on the **Smart Point**<sup>®</sup> rather than on paper file; once in the office he/she can download the report straight in the PC.

## therevolutionarytechnology

The **Smart Point**<sup>®</sup> is an extremely miniaturised 'Eeprom' encased in 'Inox' Stainless Steel. Its memory can contain up to 488 digits.

The reading/ writing process is achieved by contact, through the probe of an interface device.

The characteristics of the **Smart Point**<sup>®</sup> can cope particularly well with the taxing condition of the Railway application's environment :

- Remarkable mechanical strength.
- Infinite read/ write cycles.
- Data Retention of 100 years (renewable).
- Extremely secure data safety.
- Compatibility with any software platform.
- Temperature working range from extreme freeze to over 60 degrees Centigrade.

The use of **Smart Point**<sup>®</sup> will benefit the maintenance process by :

- Making the management of information economical and efficient.
- Allowing data access almost in real time, whether in the field or at the control centre.
- Reducing dramatically the amount of the information on paper, which in turn will result in lower costs, as well as avoiding inevitable data-entry errors.
- Automatically updating the database in a constant, immediate and effective way, as the data read/written on the **Smart Point**<sup>®</sup> is transferred in the database of the control centre.



Smart Point SA  
site: [www.smartpointsa.com](http://www.smartpointsa.com)  
email: [business@smartpointsa.com](mailto:business@smartpointsa.com)