Case Study - Rolling Stock Maintenance Delivery System

A global mining company, with one of the world's largest private rail networks, is currently working to toward significantly expanding its production capacity. With the expansion of the company's business the management and maintenance of the RTIO rolling stock becomes more important. In particular, the scheduling and delivery of rolling stock to maintenance, and its subsequent return to operations must be managed effectively.

SATEVA were recently selected to develop a new Rolling Stock Maintenance Delivery System for the client. The system addresses the following items:

- Determine the rolling stock to be maintained,
- Schedule and manage the delivery of rolling stock to the yards,
- Deliver the rolling stock to the workshop and return to operations,
- Manage and track locomotives and wagons cut out,
- Report on the availability and utilisation of rolling stock, and
- Manage and visualise the status and location of rolling stock.

Managing and visualising the location of rolling stock is a key issue across a number of the client's systems and why SATEVA proposed that a common rail model and standard set of track schematic visualisations should be developed. SATEVA developed the rail model and schematics as reusable components that can be integrated in any of the client's systems.

The Rolling Stock Maintenance Delivery System is developed using Microsoft C#.Net, WPF, SQL Server Reporting Services, and Oracle. During the project a common rail model, a track schematic, and a stylised schematic (i.e. single page view of the rail network) were developed. These were all developed as reusable components that could be integrated and form parts of other rail systems with the client's application software portfolio.

SATEVA is a technology consulting firm based in Perth, Western Australia. SATEVA specialises in providing technology consulting services to the mining, metals, and rail industries. Our company provides application development services in areas such as exploration, mine geology, grade control, planning, rail systems, ore tracking, inventory management, reconciliation, and data management.