

Rail asset management go

ThalesMan transforms the efficiency of rail operations – at the touch of a button

In the race to remain competitive, the rail industry has made huge IT investments in recent years. Computer applications embracing everything from asset management to staff rostering have brought major efficiency gains.

But in many cases, these applications have remained tied to the desktop. In the rail environment, with staff constantly on the move, the people who most need IT often have no access to it. To get real value out of IT investments, what's needed is a way to share information with the mobile workforce. And that's precisely what ThalesMan does.

Asset management on the move

ThalesMan is an integrated framework that provides a mobile gateway, via a ruggedised handheld PDA, to back-office systems and industry-standard asset management platforms, such as IBM's Maximo. The result? A solution that is capable of transforming just about every area of rail operations.

ThalesMan uses a mobile, device agnostic, context sensitive framework produced by mobile middleware specialists Appear Networks. The framework is field-proven, having already been deployed at a number of European rail companies.

"What we've done is provided a flexible mobile interface to back office applications such as Maximo, using proven

technology that can interface to multiple rail applications in a user friendly way" explains Dr. Steve Ayers, International Transport Offer Manager, Thales. "So you've got a PDA, with context sensitive screens which are pulled up and linked over a middleware product using GSM-type communications integrated into a suite of applications including Maximo."

Seamless maintenance

ThalesMan has the power to transform the efficiency of maintenance operations – and that starts with fault reporting. Engineering staff or drivers identifying a problem with track-side equipment or a locomotive can then use the ThalesMan PDA to log the problem and send notification details straight through into back office asset management systems such as Maximo.

This initiates a seamless electronic workflow process, which includes identification of replacement parts for the job and raising a work order: instructions are then relayed to a maintenance engineer via ThalesMan. And when the job's finished, the engineer can upload details remotely using the ThalesMan PDA, automatically updating the asset configuration, such as the serial number and details of the replacement.

Supply chain management

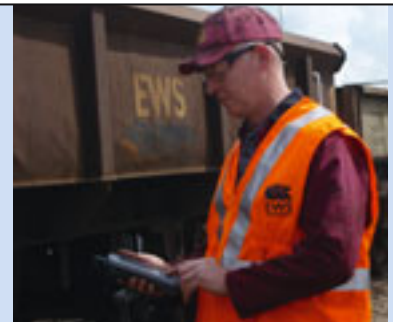
As well as solving operational problems with unprecedented speed and efficiency, active management of this sort allows operators to get better value out of their fixed and mobile assets.

Euro Cargo Rail: a service-proven solution

EWS, Thales' partner in the strategic Transeo Alliance, has deployed a mobile driver application using the same technology stack as ThalesMan. Known as Rapide, the solution is in use in France by international rail freight operator Euro Cargo Rail (ECR).

Euro Cargo Rail's challenge was to speed up the time-consuming process of 'consist' generation: each wagon has to be inspected before the train can depart. Rapide enables train drivers to electronically sign on, view their roster and diagram information and produce the train consist. ECR driver produc-

tivity and job satisfaction have increased, whilst the average time to prepare a train for departure has been reduced by 40 minutes. During the pre-journey train examination, each wagon's actual details are checked against the expected data previously downloaded onto the driver's handheld PDA. Both RFID tagging and optical character recognition (OCR) options are supported by the technology. As well as reducing turn around times, the approach improves regulatory compliance with secure data management and event recording.



Rapide also provides in-cab driver assistance, including:

- Remote staff sign-on/sign-off
- Electronic rostering
- Paperless operational notices
- Diagram details
- Schedule Card information
- Reporting of delays, incidents and faults
- Panic button

es mobile

“There’s huge capital tied up in these assets and you need sophisticated systems to manage it” stresses Dr. Ayers. “One of the business benefits of putting in this type of solution is being able to talk to the supply chain and making sure you’re getting the correct warranty on components if they fail.”

In tandem with this, active asset management helps to improve track and fleet reliability and reduce in-service failures through condition monitoring of critical components. Improved records and data analysis also support reliability-centred maintenance strategies, allowing operators to improve workshop productivity and reduce the spares inventory.

Targeted information

The handheld device used by the workforce incorporates powerful ‘context aware’ technology, which means that both the device – and the databases it’s talking to – know exactly where it is. The ability to geographically pinpoint the PDA – and the workforce – means it’s possible to feed context-specific information back to the handheld device.

ThalesMan bundles together an array of robust tracking, communications and data-acquisition technologies. These include GPS for precise geographical location, GPRS mobile data services, optical character recognition (OCR) and RFID radio-frequency identification. Combinations of these technologies make it possible for mobile staff to identify assets quickly and easily – such as individual wagons or containers – and to report their whereabouts with pinpoint accuracy.

In tandem with this, the combination of GPS location of wagons, remote tracking of RFID tags and location mapping – and the ability to share that information via a secure anytime-access web portal – means that integrated location-based tracking is set to become a reality. And in Europe’s growing rail freight market, that means operators will soon be able to offer their customers real-time cargo tracking.

Mobile revolution

ThalesMan is tailored to the requirements of the railway industry and it has the capability to integrate seamlessly with a wide range of enterprise resource planning (ERP) applications, providing a flexible operational support framework for infrastructure managers, passenger operators and freight businesses.

It’s based on the recognition that IT does not stand by itself – and that to be relevant, technology has to be aligned with the needs of the core business, including the requirement to operate within budgetary, regulatory and operational constraints. “ThalesMan provides a flexible framework to enable staff to multi-task” emphasises Dr. Ayers. “In addition to asset

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ThalesMan takes business-critical IT out of the office and puts it into the hands of key front line staff, including train crews, maintenance engineers, back-office control staff and other key users. Specifically designed for the rail industry, with rugged handheld devices for use in the field, Thales’ mobile solution is tailored to the needs of passenger, freight and infrastructure operators.

Capabilities include:

- Asset management integration, including a Maximo interface
- Fault reporting and maintenance workflow management
- Assistance with bespoke information delivery to drivers and maintenance engineers
- ‘Context aware’ integration for tailored data downloads
- Seamless voice and data communications for mobile staff

Benefits include:

- Improved fixed and mobile asset reliability, availability and utilisation
- Reduction of expensive in-service failures
- Faster service turn around times – the right resources in the right place at the right time
- Improved warranty recovery and reduced spares holding
- Maintenance and material recording for auditability compliance



Extracted from ThalesMan demo presented at InnoTrans 2008

management, other value-added applications can be accessed such as rosters, freight and passenger information. This has already happened in other industries with mobile workers. ThalesMan means the rail industry can now reap the benefits of this technology.” ↩