

## MAINTENANCE CENTRE FOR RAILWAY SIGNALLING

The Maintenance Centre Thales NetTrac 6618 improves the maintenance works fulfilling the requirements for the common activities of the maintenance staff.

The product consists of a set of modules that can work separately or as unique application depending on the customer needs. Each module covers a specific feature concerning different maintenance activities.

### Intelligent Maintenance Concept:

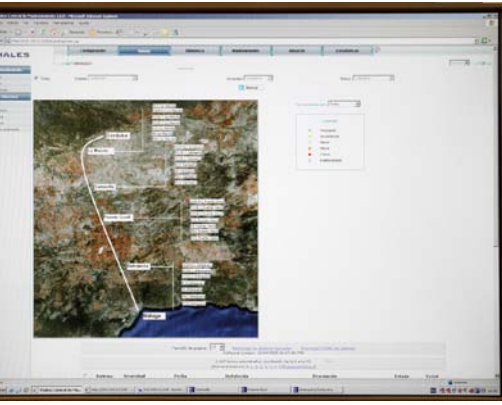
The main intelligent capabilities of the product that enrich the services offer are:

- ▷ On line remote supervision and management of field elements alarms and events: alarms and corrective modules.
- ▷ Predictive maintenance: statistics and trend analysis, dynamic preventive planning.
- ▷ Trouble shooting: guided trouble shooting step by step, including housing information.
- ▷ LCC (Asset Life Cycle Control).



## NetTrac 6618 Maintenance Centre





## EFFICIENT SUPERVISION AND MAINTENANCE CENTRE

# NetTrac 6618

### User benefits:

Cost reduction and effectiveness increase of the maintenance activities.

- Reduction in time response on incidences and preventive maintenance (30-70%)
- Reduction on number of incidences thanks to predictive maintenance (50%)
- Reduction on learning curve of newcomers thanks to guided troubleshooting (50%)
- Reduction on spare parts thanks to LCC management (30%)

## MAIN FUNCTIONS

### Alarm Management

This module displays in real time all incidences detected by the field systems which belongs to a railway line.

The module is able to send SMS, mail and fax alarms about the detected incidences.

There is also an historical registry where all incidences that have taken place are stored.

### Corrective Maintenance

This module enables recording and controlling the evolution of the registered incidences (tickets). As a result, there is real time information on each incidence including state, maintenance staff assigned to its solution, actions to be taken and remaining time.

The module offers the definition of the service level agreements, so it is possible to configure notifications (SMS, Fax) to advice the imminence of the time dead-line assigned to a ticket.

All this information is historically registered for statistics purposes.

### Document Management

This module permits the management of the maintenance documentation in a ordered way, allowing the document versioning. The information is organized in document categories which facilitate access to the registered users.

It provides a powerful search engine for the document localization.

Likewise the users can add comments to the documents for requesting documentation changes. This function gives the possibility to maintain the installation documentation updated with a low effort by the maintenance staff.

### Preventive Maintenance

This module implements the following three main functions:

- It allows the definition of forms to get the results of the preventive maintenance activities.
- It gives the possibility to introduce the information of the preventive maintenance measurements and checking, guiding the user in the analysis of the obtained results.
- All information is stored in the historical database for statistical analysis.

### Spare Management

This module enables the management of the stored or installed spare parts, as well as of the tools required in the maintenance activities.

The application stores the evolution of the different components to get Mean Time Between Failures (MTBF) based on real life experience.

The module can also display different reports with the possibility of filtering and classifying the information by various criteria like techniques, locations or suppliers.

### Maintenance Staff

This module provides the possibility to manage the personnel assigned to the maintenance activities.

It allows to create the planning shifts and the rules to check them (double shifts, overtimes).

Likewise, this module can be linked to the corrective and to the preventive maintenance activity for making them work in an integrated way.

### Statistics and Metrics

This module represents a tool that provides different reports and analysis based on the information stored by the rest of the modules.

As examples of the information supplied by the module there are performance time to solve incidences, work distribution to analyze peaks and valleys, average time for repairing components, MTBF of systems and components and effectiveness of the preventive maintenance activities.

### Project Data Configuration

This module contains the administrator utilities to configure the system parameters such as users and privileges, railway installations, warning types, notifications types, etc.

## KEY BENEFITS

- Scalable web application (from two desktops up to multiple servers).
- Multi-platform.
- Multi-language capability.
- Intuitive and easy to use.
- Accessible from any point of wired and wireless network.
- Integrated and modular system that satisfies all maintenance requirements.

## TECHNICAL FEATURES AND CONFIGURATION

- The current configuration consists of three servers: APACHE 2 (web server), JBoss4 (application server) and MS SQL Server 2005 (data base server).
- Data can be stored in Microsoft SQL Server or Oracle databases.
- The minimum requirements to run client applications are Internet Explorer 8.
- PC server must have a GSM modem, a fax modem and/or access to a mail server to be able to send notifications.

## REFERENCES

- High Speed Lines (Spain):
- Lérida-Tarragona-Barcelona
- La Sagra-Toledo
- Madrid-Segovia-Valladolid
- Córdoba-Málaga
- Madrid-Levante
- Barcelona-Figueras
- Orense-Santiago de Compostela
- Commuter lines C2 and C5 in Seville
- Commuter lines Madrid
- Basque railways Centre in Vizcaya
- México – System 1