## **DUCATI** energia

## WINRCE

WINRCE is a software, which works on PC, with an intuitive graphical interface that offers to the customer a double functionality towards equipment RCE, Chronological Recorders of Events in the railway signalling systems: a functionality of communication and one of reading for Memory Card.

Through the communication with RCE, in WINRCE it's possible:

- to execute the installation of a single RCE;
- to configure the list of RCE to communicate with;
- to configure a single RCE (names of events, configuration data, clock/calendar);
- to communicate with RCE, acquiring the recorded events on inner memory (disk on chip) and Memory Card;
- to communicate with RCE, acquiring the alarm, if present.
- to send *Remote Command* to single RCE (for example: ask for configuration data, acquisition of actual state of events, firmware version, restart command of the RCE)

Railways events and alarms, obtained from the inner memory, can be easy examined with the appropriate functions of WINRCE.

Also the reading of the Memory Card through WINRCE, once that it has been extracted from the RCE or read through remote command, it allows the examination of recorded data.

## System of centralized data transmission

The communication functionality remarkable advantages especially when more RCE are connected in network; it establishes a SYSTEM of CENTRALIZED DATA TRANSMISSION.

In this configuration, WINRCE represents the main control and data center for the connected RCE. It's possible to connect and communicate with different RCE: RCE for station (UMAR8, UTM512) and RCE for place along railways lines (UTM48).

The system of cetralized data transmission ensures to the user economic advantages to recover information and technical advantages to examine acquired data by RCE protocol.

We shortly list the main benefits of this system:

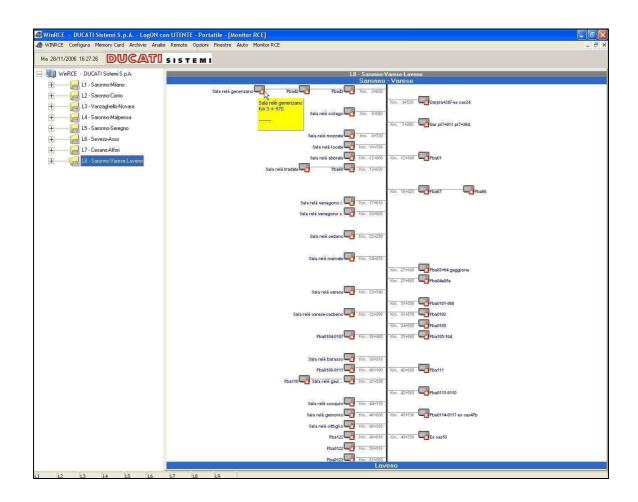
- smaller costs to recover information;
- minor physical volume of the data archives;
- immediate availability of data;
- facility of reading and analysis of the data;
- possibility to use the data for different purposes respect to the fiscal use.

## Schematic diagram

The main window of the program contains a schematic diagram that allows to show a general representation of the system and to have on hand the several functionalities of the program.

The left side of the window show the total system configuration in a tree-structure that allows to access to the system for levels, that is to the railways lines ones and, for every line, to the remote configured RCE. Therefore, it's possible to have a global vision of the entire system.

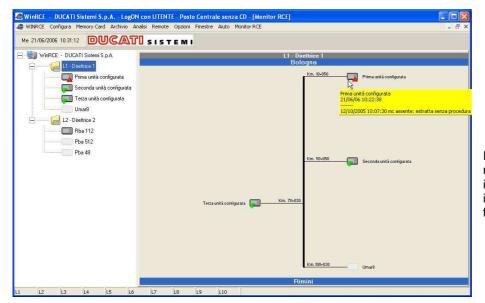
Selecting a railways line with mouse, the right side of the window shows the entire railways line in a diagram in which the several remote RCE are placed on the line depending on the kilometer of installation and the position on the railroad (even or odd).





In case of active communication, the icons of the enabled RCE can change dynamically depending of their current state.

In this way we have a global vision of the state of the RCE in one entire railways line.



In case of alarms or errors, if you move the mouse on the RCE icon, it is possible to see immediately which is the last error or alarm received from the machine.

If you select one RCE in the list on the left, the right side of the window shows various data of the RCE and it's possible to have on hand all the available command.

In particular, for each RCE we have the following sections:

- **Configuration**. Here are displayed all the configuration data about the remote RCE. These data are "read-only" for the user. It's possible to access to the events configuration window through the **Conf. Ingressi** button. It's also shown the RCE state through an appropriate icon.
- **Opening archive file**. It's possible to open received events file, events recorded on Memory Card and error file
- **Commands**. Here are all the remote commands available for sending to RCE. In addition, through *Conferma Allarme* button, the user can accept the alarm signals received from the RCE, that are shown in Diagnostic section.
- **Diagnostic**. It's a table that contains all the diagnostic events received from the RCE in real time during the communication (until a maximum of 100 events). For every alarm it's shown date, time and name of the event. Such data remains available until the close of the program.

The alarms that require special attention from the user are marked with "alarm" icon .; pressing the **Conferma Allarme** button, the user confirm to take vision of the last alarms and consequently the RCE will not have more the alarm icon (even if alarms already received remain however in this section).

• **Graphic of the events**. Through this diagram, it's possible to observe in real time the events sent from current RCE, since these events are displayed on a time axis when WINRCE receive them. It's possible to change the scale used for the time axis through the *zoom* button at the bottom of the window. WINRCE display all the variations of the events received in the last 2 hours.

Through the *Allarga grafico* and *Riduci grafico* button, it's possible to look at different view of the received information.

