ReDAT

Controlling Analytic Centre (CAC) for the railway traffic control

Case study - the gradual deployment of centralized remote traffic control within the entire railway network of the Czech Republic

The CAC system integrates and archives data from systems for capturing and recording voice communication and CCTV video throughout the Czech Republic. It is a project which, in accordance with European trends, creates preconditions for the gradual deployment of centralized remote traffic control within the entire railway network of the Czech Republic.

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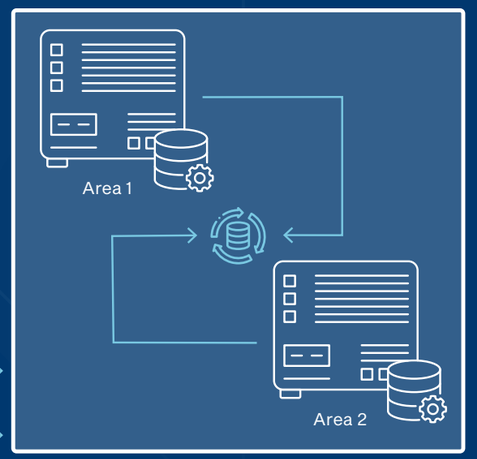
A TOOL FOR COMPLEX RECONSTRUCTIONS OF EVENTS IN A RAILWAY ENVIRONMENT

WHAT IS CAC

The Controlling Analytic Centre offers tools that enable the complex analysis of events, incidents, etc. from records in the railway environment.

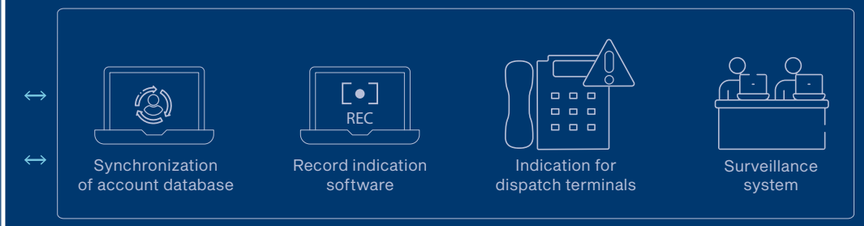
A situation is reconstructed by the time-synchronic reproduction of t he voice, video, screen records and logs from security systems and signaling devices. Among other supported functions of the CAC is the transmission of a current real-time situation (audio, video, screen) from a selected locality to the superior center.

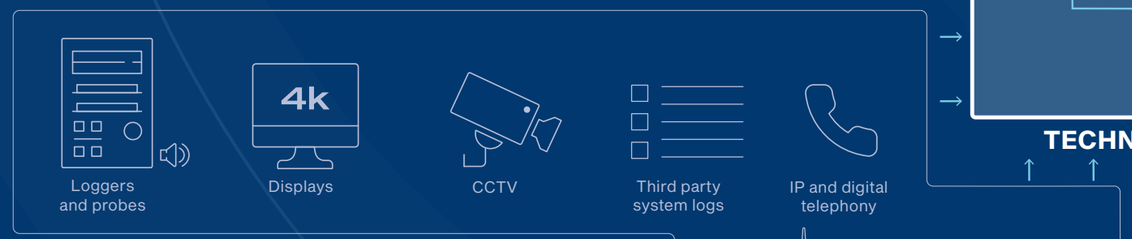


TECHNOLOGY CENTER

The CAC system provides reporting and analytical functions over the recorded and operational data. Reporting and statistical outputs are available online directly in the CAC user interfac or are via e-mail.

USER AND INTEGRATION INTERFACE





The recording and capturing means are organized according to the geographical location in the railway network. The access to all data and enabled functions are controlled by a system of access rights.

RECORDING AND CAPTURING MEANS

CONTENT OF THE CAC PLATFORM

The CAC system consists of the following components and integrates the following systems:

- Systems for capturing and recording voice communication of dispatchers
- Systems for video monitoring of objects related to traffic management (CCTV)
- Systems for capturing and recording screens of dispatchers' monitors
- Electronic security devices and other equipment related to railway operation, from which CAC obtains, archives and presents records (logs) of activities
- Communication terminals of dispatchers
- Software means for indicating the recording function
- Interface for connection to the SŽDC user account database
- Interface for central time synchronization
- Technological part of CAC
  - CAC user interface application
  - Applications and methods for statistical and analytical processing of records
  - Traffic monitoring of the CAC system

ACCESS RIGHTS LEVELS

BASIC

Intended for workers in the direct performance of transport services. Professions using this mode are mainly dispatchers.

PASSIVE

Intended for operational use within the needs related to the control of the direct performance of the transportation service. It is intended for employees performing inspections related to the performed activity.

ACTIVE

Intended to provide evidence for the conduct of investigations of emergencies. Professionally, it is intended for employees across the Railway Infrastructure organization, participating in this activity.

SERVICE

Serves to ensure service conditions related to the trouble-free operation of the CAC and the trouble-free integration of monitoring and recording systems. This access level is used by service organizations managing the infrastructure.

ANALYTICAL

It is used in the analysis of data related to the activity of creation, organization and management of the railway transport route in order to optimize it in terms of technical, economic and personnel conditions. This mode is mainly used by transport technologists, analysts and standardizers.

ADMINISTRATOR

It is used for monitoring the operation of CAC technology and system diagnostics. Furthermore, for configuration, setting and optimization of the CAC system according to all necessary input parameters and according to the requirements of the investor. This level is used by the CAC system administrator.

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CAC SYSTEM SUPPORTS

- 500 CCTV video channels
- 4 000 voice and audio channels
- 150 screen recording channels
- Integration of major railway technology to store and visualize its logs

BENEFITS OF THE CAC SYSTEM

- Unifies recorded communication and operating data of the railway infrastructure into one single system and allows its users to view the infrastructure situations “in context”
- System is accessible to users with different access rights that are defined according to the needs of the particular railway proffesion level
- Reproduction of a complex infrastructure situation (synchronous playback of all input channels, signals and data)
- Simple and intuitive interface with efficient map layers
- System is open to the third parts systems integration

If you are interested in the solution for control rooms of dispatch centers, do not hesitate to contact our sales department.

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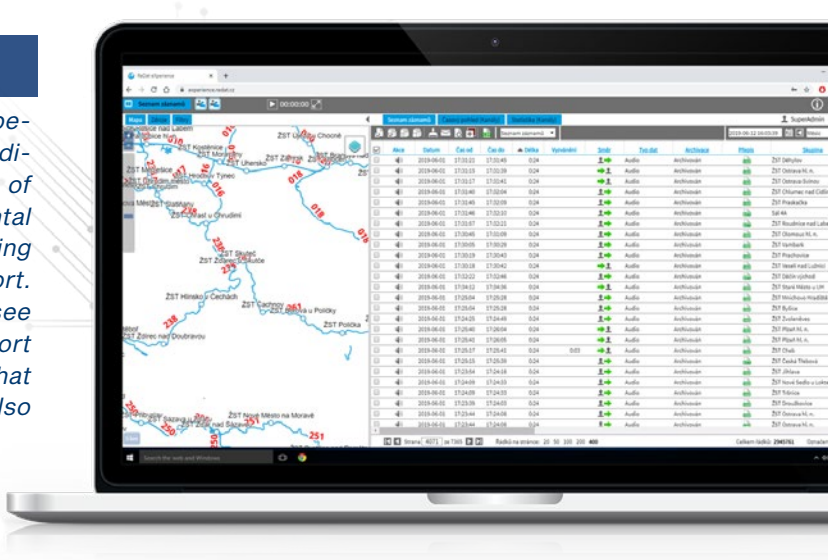
EXPERT’S OPINION

„...I see considerable potential in this system, especially for the operative control of transport. In addition to a complex record and activity monitoring of the dispatcher, the system also offers supplemental tools and services for the broad spectrum monitoring systems commonly used today in railway transport. As an expert in the field of railway transport, I see Controlling Analytical Centre as a beneficia! support element for the control of railway transport, one that considerably increases the safety and naturally also the smooth flow of railway transport.”

Ing. Peter Blaho, PhD.
Expert in the field of railway transport



ReDAT Recording Systems, a business division of RETIA, a.s., which provides a sophisticated system for recording voice, screen and other relevant data. The system automatically analyzes the data to make it available to system users in a clear and structured way.

RETIA, a.s. is a Czech company based in Pardubice, founded in 1993. It develops, manufactures and modernizes radars, command and control systems, UWB localization and communication systems and ReDAT Recording Systems.

MEMBER OF CSG aerospace