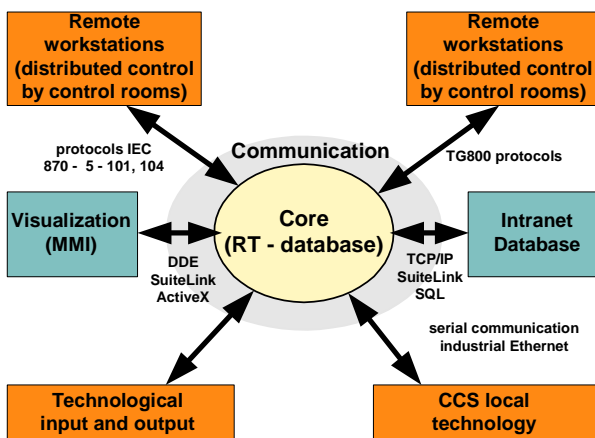


## OSCART – Software for Real-time Applications

**OSCART is a modular software environment for the creation of real-time applications with a focus on data transmission and processing. It is designated for computers using Windows XP/2000/NT. OSC, a.s. uses OSCART in their real-time-control applications in the power generation and heat generation industries.**

The main advantage of **OSCART** is the real-time work support (communication and computational features) in standard computers using Microsoft Windows operating systems. **OSCART** has an open modular structure that can be adjusted to specific applications.



### Description of Features

The **OSCART** core primarily administers a real-time database. The database supports discrete and analogue data types and text strings. Quality (reliability and reference to limits) is monitored with database entries. The database ensures that all values are presented in a uniform fashion regardless of the type of communication from which the data were obtained. The **OSCART** core also includes tools for highly powerful synchronization of the database between multiple independent computers connected via Ethernet using TCP/IP. The synchronization is used for duplexing in mission-critical applications where maximum reliability is required.

**OSCART** communication modules transmit database values in the **OSCART** core.

*Communication with local control systems (Communication Control System – CCS Technology) – OSCART communication modules support standard*

industrial serial communication protocols (e.g. MODBUS) as well as corporate protocols of operating system manufacturers. Both standard RS232/485/422 serial interfaces and special hardware for connecting to industrial communication systems (e.g. Profibus or various wireless solutions such as industrial radio modems) are supported in **OSCART**. Software of third-party manufacturers based on DDE or OPC servers can also be integrated into **OSCART**.

### Effective real-time work

*Real-time execution of control and communication tasks without the need to work with special HW or SW platforms. Maximum utilization of standard Windows features.*

Direct signal inputs and outputs can also be used as connection to technology. Advantech input/output modules are supported for both direct connection of signals to PCs (plug-in cards) and distributed contact with technology (ADAM modules for signal connection).

### Flexibility

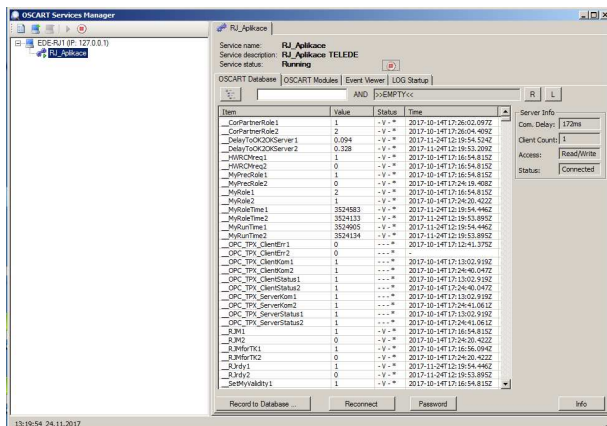
*The OSCART modular structure and the uniform interface of individual modules enable modification of the system to specific applications.*

*Communication with remote workstations can be used to connect the control systems of distributed parts of the technology or parent control rooms (corporate control rooms, control rooms of partners or contractors/clients). Remote connection primarily utilizes general protocols based on the IEC-870-*

5-101 and IEC-870-5-104 standards. The first protocol is especially used with dedicated serial lines and the second, as an add-on to TCP/IP. Communication based on IEC-870-5-104 is suitable for connection using Intranet/Internet or wireless transmission solutions, including GSM technology.

**OSCAR** carries out diagnostics of every communication in order to ensure a high level of operational reliability and a clear analysis of failures. The diagnostics include statistical assessment of operation (especially important with respect to communication with remote workstations, where it also monitors the quality and reliability of communication lines) and detailed records of communication at a character level. **OSCAR** includes tools for the analysis of communication records (decoding the contents of communication and searching for events in communication).

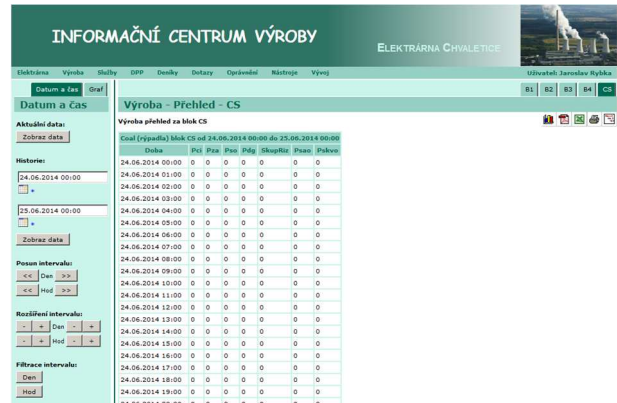
A specific type of **OSCAR** modules are the computational modules for database computations. The modules are created in C++ in order to achieve high performance and variability.



The **OSCAR** system does not have its own user interface for end users (it includes a diagnostic console that allows independent operation of unattended applications). Whenever interactions with users are necessary, **OSCAR** supports connection to third-party MMI tools (e.g. InTouch by Wonderware or Promotic by Microsys). **OSCAR** may also be inserted into the ActiveX container and it supports VisualBasic scripts.

A LAN connection is supported for archiving or further processing of data from the **OSCAR** database.

**OSCAR** includes SuiteLink option to utilize Wonderware archiving tools (the Industrial-SQL database) as well as direct access to the SQL server or support of other specific TCP/IP solutions.



Typical applications using **OSCAR**:

- **protocol converters** – converting data contents between mutually incompatible communication protocols
- **data concentrators** – data acquisition for unification prior to their further processing or making available to operators
- **terminals of power facilities and OSCALC** – turn-key applications supplied by OSC, a.s. aimed at real-time monitoring, control and assessment of power generation at the level of single generation unit or at the level of the entire power generation company
- **emission monitoring** – data acquisition and assessing

OSC, a.s., company covers with its activities the area of production and distribution of electricity and heat. The Company provides a wide spectrum of engineering services, repair and consultancy services, and supplies complex, key ready sets of technical means for up to date control systems, systems for data and information processing and transfer, and simulation systems; the Company also develops special electronic elements and devices.