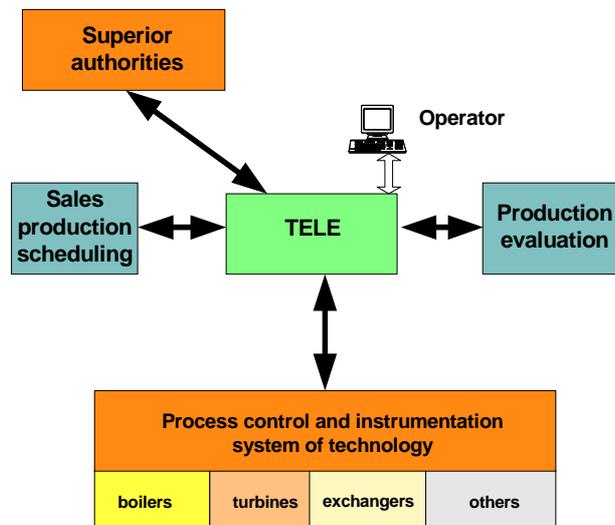


## TELE Plant terminal – Distributed Real-Time Unit

The plant terminal (**TELE**) is a technical means of effectively resolving the issue of operational control of a power generating plant when providing ancillary services for the Transmission System Operator (TSO) and/or when controlling the operation of a plant from other authorities outside the power plant itself (important customer) or as a part of it (plant dispatch centre).

The main feature of **TELE** is support for the comprehensive implementation of the chain of planning, control and evaluation of the status of the production and supply of electric energy in real time and in all sequences. The condition of efficiency control is respecting the business commitments and technical capabilities of the plant, which are on-line monitored by **TELE**.



### Function description

#### Communication with superior authorities.

This is real-time data transfer. When providing ancillary services **TELE** communicates with the control system which is placed at transmission grid dispatch centre. Depending on local conditions **TELE** is able to communicate with the transmission grid dispatch centre, plant dispatch centre of a supplier or with the systems of important current consumers.

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#### Scalability

Implementation of the OSCART system (a product of OSC for real-time control and information systems) allows easy adaptation to any local conditions

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#### Communication with technology control systems

is used to acquire of data about the actual state of technology and for transferring the requirements arising in **TELE** to be realized at the device. This is done either by data communication with local control systems of the plant and/or by direct connection of analogue and digital signals to the I/O side of **TELE**.

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#### Modularity

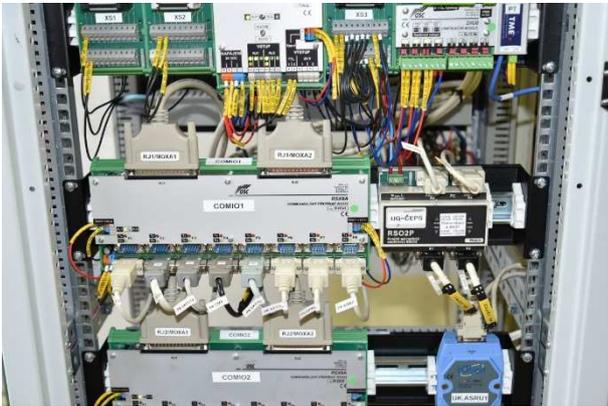
Adaptation to the functional requirements for the control of a certain plant is easy thanks to the modular conception of the **TELE**

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#### Cooperation with production scheduling

is used for transferring the business commitments of the plant for technical realization. **TELE** checks the designated production schedule for feasibility in relation to the technological status, and allows it to be operatively modified and changed. According to the production schedule it directly controls production and issues offers of control for superior dispatch centres. To ensure maximum operational suitability of planning in relation to the results of sales department activities **TELE** allows the production schedule to be set up to the last moment before the planned values become valid.

**Real-time control is done by TELE** in compliance with the production schedule and the current requirements of superior authorities. It generates set points for individual technological parts, mainly for the turbogenerators producing electric energy.



**TELE** can optimize the division of load to turbo generators with respect to economical parameters (use of maximum efficiency of a device, preferences for low cost plants and respecting other restrictions).

**TELE** is also usable also for teleregulation of other production parameters and supply (reactive power control, heat production control).

In dependence on the production and supply of electric and heat energy it can provide superior control of boilers during their operation into a steam collector (requirements for the balance between the production and consumption of steam).

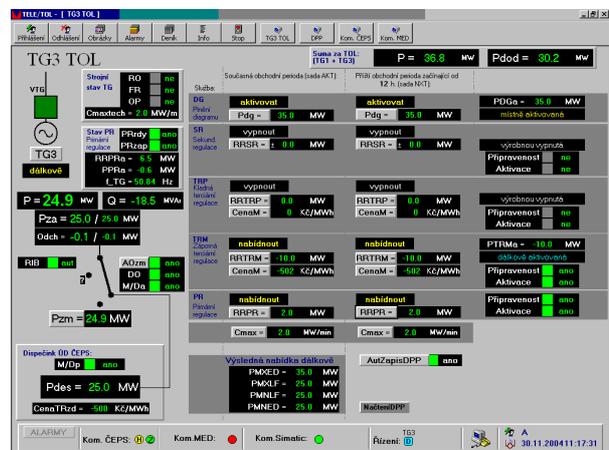
**TELE** provides documents for the **production evaluation** of a plant, monitors the amount of electric energy produced and supplied and the volume of ancillary services provided as a basis for billing and allows data integration with complex plant evaluation systems which also monitor parameters outside the control of TELE (heat production, fuel consumption and other commercial and economic indicators).

All data necessary for the evaluation and back analysis of devices under the control of **TELE** is saved in its own archives.

**TELE** is fully compatible with the **OSCVANTAGE** product, developed and delivered by OSC, which offers customers a presentation of **TELE** archived data in the customer's intranet environment.

The **man machine interface** is provided by the Promotic SCADA system (product of Microsys Osrava). The user interface is fully graphical giving operator support with an alarm system and a diary).

The **TELE** solution uses **industrial PCs** equipped with Microsoft® **Windows** operating systems. The **TELE** configuration is scalable from one PC encompassing all functions through configuration with two PCs (separation real time function from other functions) to configurations with many mutually redundant PCs for maximum operational reliability. Real time functions are carried out by the **OSCAR** system developed in OSC.



**TELE**, based on the OSCART system, now works in all CEZ power generating plant systems and in many independent energy producers (Sokolovská uhelná, Elektrárny Opatovice, Dalkia Czech Republic).

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.