Vladislav Ladonkin
S.N. Protsenko, research supervisor
V.V. Gubkina, language adviser
SHEI "National Mining University", Dnipropetrovsk

HMI/SCADA Zenon

In our time the effective management of the enterprise requires systems to be automated. Modern development of automation systems is characterized by introducing such various microprocessor automation as smart sensors, functional units, controllers, display and operator panels. SCADA automation system is considered to be the most effective as it facilitates the creation of complex programming and increases the quality of management.

SCADA is software designed to develop various software applications being able to provide data collection, processing, analysis, display, data logging and formation of control actions in real time. SCADA system zenon is a staple of Austrian company COPA-DATA GmbH and is a leader in the market of HMI / SCADA systems. Zenon solves all possible tasks that are put before the HMI / SCADA system and allows to carry out convenient and intuitive control, clear communication of all engineering systems, automatic adaptation and intellectualization modes of the subsystems. Zenon SCADA system is designed to run on the operating systems of Microsoft.

Development of human-machine interface and the logic of its work involve the development of zenon environment and complex logic problems, as well as the simulation of physical problems which can be solved with the help of controllers of programming languages of IEC 61131-3 designed in the environment of Logic Workbench. Performance of the developed human-machine interface takes place in Runtime zenon RT, a program developed in the Logic Workbench Logic RT runtime software which implements a programmable logic controller.

Relationship between zenon RT with programmable logic controllers, operating system and database is done using the drivers. Each connection has its own driver, which provides ease of adding support for new devices, ease of expansion SCADA system and the ability to customize each connection. The driver provides the communication protocols between the SCADA system zenon and peripheral devices connected through the physical and virtual channels. SCADA system operator using the HMI can monitor the changes in the management, analyze the resulting data, perform process control and respond to abnormal situations.

The HMI/SCADA system zenon is implemented in many industries to provide ergonomic and highly dynamic process as it is a universally deployable product family and ensures simple, secure and independent automation for many companies worldwide.