

INDUSTRIAL AUTOMATION  
Interactive Graphical SCADA System  
**CUSTOMER CASE**



# Distributed Water Supply Plant in Ukraine



<b>Customer</b>	STRYIVODOKANAL
<b>Country</b>	Ukraine
<b>Industry</b>	Water supply & wastewater treatment
<b>System Integrator</b>	TAKT and SOLITON
<b>Application</b>	IGSS - 400 objects
<b>Data</b>	
<b>Inhabitants in Stryj</b>	60,000
<b>Daily production of clean water</b>	25,000 m <sup>3</sup> ~ 6.6 million gallons (US)
<b>Daily treatment of wastewater</b>	25,000 m <sup>3</sup> ~ 6.6 million gallons (US)
<b>Number of water wells</b>	28
<b>Total length of water supply (600 mm pipeline)</b>	250 km ~ 155 miles
<b>Wastewater treatment pipeline</b>	97 km ~ 60 miles

STRYIVODOKANAL supplies clean water to the city of Stryj with more than 60,000 inhabitants

The IGSS system controls the extraction of water from wells and provides an overview of the equipment status. IGSS reports on energy consumption and water well productivity. Furthermore complete process automation, monitoring of electrical motor protection systems and reduction in energy resources are achieved by using IGSS.

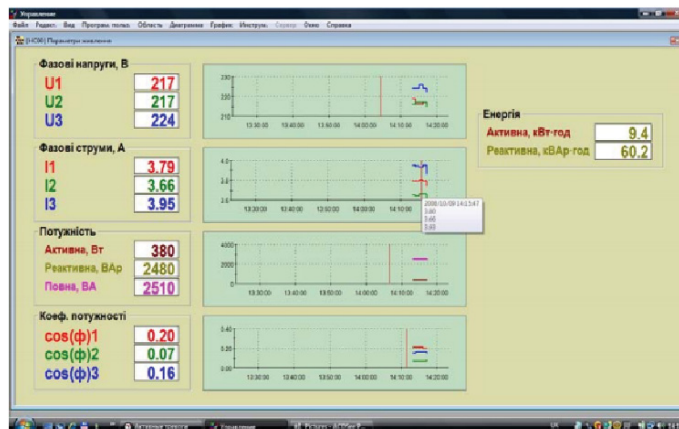
### The Challenge

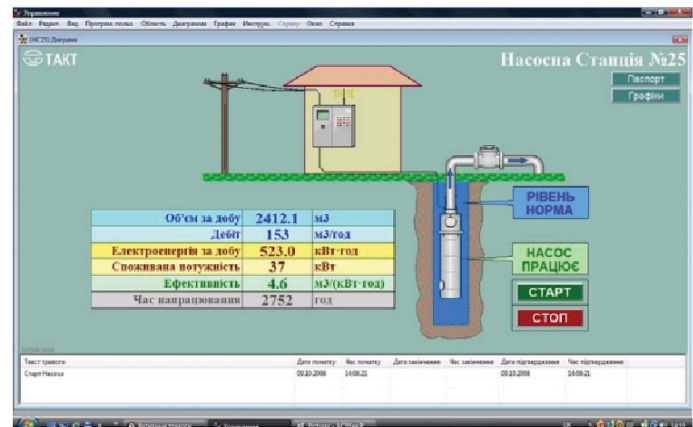
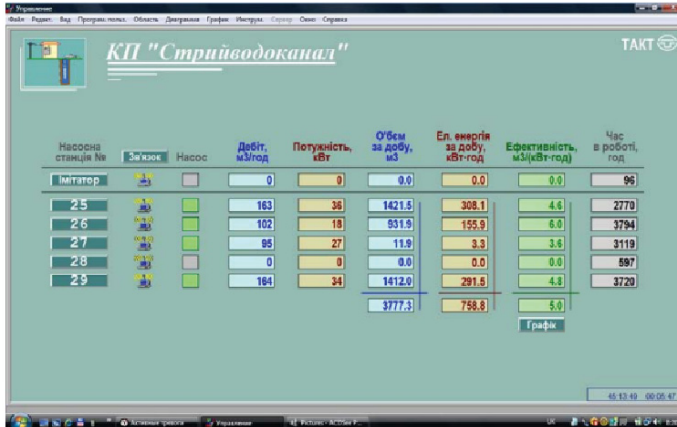
### Distributed Operation

The water supply system consists of objects which are widely distributed: 12 water wells, operator control stations and mobile terminals.

Each station is located in a remote location. It is, however, vital to obtain accurate information with minimal delay in time.

When maintenance work needs to be performed, it is important to be able to control the water treatment process directly on site by means of a portable terminal. The IGSS SCADA system fulfills all these demands.





„The positive result acquired by installation of IGSS allowed our company to provide 24 hour clean water supply to the citizens of Stryj and Morshin. Maintenance has become much more simple for us.“

Roman Ealyk,  
Senior Engineer of  
STRYIVODOKANAL

#### The Solution

### Scalable IGSS system

The automated control system provides several functions: telemechanics, process control and audit of consumed energy resources.

The physical setup consists of DirectLOGIC DL05 PLCs, water well level sensors, relays, GSM modems and power supplies. These are used to control the work of water pumps, protection relays, frequency regulators and energy meters.

The IGSS SCADA system manages incoming process data, controls water well equipment, audits data by means of grids and tables, logs operator actions, and creates energy consumption reports.

#### The Result

### Overview and Flexibility

The implementation of the IGSS SCADA system has provided centralized control of the water supply, audit of energy consumption, alarm messages in case of emergencies which in turn protects the water pumps.

Other important advantages are: 24 hour channel diagnostic with automatic logging of events and sending of SMS reports and warning system for intruders breaking into the station.

Overall results are: reduced energy consumption, increased quality of water supply for end customers, increased life-time of equipment, simplified maintenance and effective process control.

#### The Future

### Further Installations

The implementation of IGSS proved itself extremely useful for remote centralized control of widely distributed objects. The need for further integration of similar systems in the municipal sector like boiler houses, water & power stations is obvious.