



Innovations in time. Innovations for you.

INFOSTROY

Information Systems Technologies Research Outsourcing for You

Energy and Utilities

Areas of Expertise: Communications, Manufacture, Business & E-Commerce, Embedded Systems

In modern word solutions for energy counting, saving and using became highly actual in conditions of ecological problems and high cost of energy resources. Our solution developed for the area of energy counting and saving resolves different tasks of our clients. For some projects in this area we are cooperating with our partner OWEN specializing in the development of different hardware and programmable controllers necessary for effective solutions in energy control and saving.

**Robust Solutions
For Utilities And
Green Energy**



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Projects examples:

- Software to calculate and manage pumps for working with optimal parameters for water delivering stations
- Data Import from Gas Counting Systems
- Application for used gas cost calculation
- Smart Home Metering System
- Light Management System

Software to calculate and manage pumps for working with optimal parameters for water delivering stations

This is a specialized software which allows calculating optimal working parameters for water pumps. During the day water pumps on pump stations should provide some pressure of water and deliver some necessary volume of water in a certain time interval. At the same time if there are a few pumps with different capacity, power and volume of water pumped in defined timeframe, then it is possible to optimize the use of such pumps in the sense of used electrical energy. To resolve these tasks we have developed special software that calculates working parameters for pumps and then provides these parameters to pumps for their management. On the modern level, this software is realized as a special embedded software for programmable logical controllers working in real time under Linux and managing many pumps.

Data Import from gas counting systems

This is a special module for working with Oracle database to import data from gas counters and conduct preliminary data processing. The main goal of this software consists in processing millions of records in short time interval (few minutes). These data is used for further calculations and billing process.

Application for used gas cost calculation

This is a special module that makes calculations for billing process for clients using gas. This module is developed on Java and communicates with Oracle database to provide fast data calculations. This application is a core of the billing system to invoice end clients.

Smart Home metering system

The system is combined from the following set of devices that communicate via WiFi:

- Wireless Heat cost allocators,
- Wireless adapters for water/gas/electricity meters
- Wireless M-Bus-RS485 Data logger
- PLC-based ModbusTCP bridge.

This solution allows resolving all tasks related to information collection and transfer via used utilities. Also special systems can be included into this system for electricity/light management for optimal using of electricity. We develop software for such systems and our partner OWEN develops hardware and controllers. With such approach we provide complex solutions to our clients.

Light management system

These are special software and hardware solutions based on programmable logical controllers with special controllers which realize DALI and EnOcean interfaces and allow building highly effective, customizable and manageable house/building lighting systems. Our solutions include software for PLC and software for visualization of user interface developed on CodeSys.

This is a complex solution that can be used effectively in energy management and light system building in large buildings. All these solutions are based on the newest industrial standards and technologies.

Technologies

IDE	NetBeans, MS Visual Studio 2005/2008, GCC, CodeSys
Programming Languages	C#, C++, Java, JavaScript, XML, Ix86 Assembler
Databases	Oracle
Protocols	TCP/IP, UDP, SOAP, JSON
Libraries	WinSockets, JNI, Swing, Hibernate
Design	UML, Modelio
Operating Systems	Windows OS family, Linux OS family, Embedded Linux