Case Study
Building Automation in Positron-Emission Tomography Center

Industry
Building Automation
SCADA/HMI

Partners
Chelyabinsk Positron-Emission Tomography Center

Hardware
Schneider Electric TWIDO Series Controllers

Organization
The Positron-Emission Tomography (PET) Center in Chelyabinsk is the first regional PET facility in Russia. The center was opened in 2010.

Informtekhnika JSC is specializing in automation, electric installation works, fire safety and security systems. During the last five years, the company has successfully completed many system integration projects in power distribution, CCTV, access control, voice alarm systems, and other areas.

Challenges
The PET Center building is served by an Individual Heating Plant. The primary plant functions include:

- Distribution of water for heating, ventilation and water supply
- Boiling of water during external heat carrier shortages
- Blowing ventilation using damped or drained air
- Accurate control of temperature and humidity in the PET room
- Pressurization for the fire-prevention subsystem

The primary challenge of the whole project was automation of the heating plant operations and organization of remote monitoring and control.
Solution

All field-level procedures are performed by seven Schneider Electric TWIDO controllers, each of them serving a separate circuit. The AggreGate SCADA/HMI server acts as a supervising and monitoring agent.

AggreGate SCADA is installed on a Linux server and uses PostgreSQL database for trend data storage. The server is connected to controllers via 100 Mbps Ethernet. All controllers are polled and configured using Modbus/IP protocol. This server then collects all data and offers powerful tools for device configuration and data analysis.

The system works well and will grow to over 80 branches in the future.

Benefits

- Linux compatibility
- Database-agnostic architecture, DBMS license savings
- Low per-controller license price

About Tibbo

Located in Taipei, Taiwan, Tibbo Technology Inc. brings simplicity to the embedded world defined by enormous complexity of operating systems, programming languages and design tools. Tibbo’s hardware, Tibbo-BASIC programming language with its Tibbo IDE software and the AggreGate Platform offer a complete solution for delivering robust, distributed automation and monitoring systems.