A Bulgarian company developing automation and real-time systems is seeking cooperation partners for commercial agreement with technical assistance and technical cooperation agreement.

- Scheda
- Approfondimenti

Identificativo proposta:TOBG20190610001 **RICHIEDI MAGGIORI INFORMAZIONI**

A Bulgarian software company has 30-year expertise in development of Supervisory Control And Data Acquisition (SCADA) systems for the energy and transport sectors. It is looking for European partners for cooperation on systems implementation under a commercial agreement with technical assistance in the mentioned areas and for joint development of real-time software products through technical cooperation.

Supervisory Control And Data Acquisition (SCADA) systems are computer systems for gathering and analyzing real time data. SCADA systems are used to monitor and control a plant or equipment in industries such as telecommunications, water and waste control, energy, oil and gas refining and transportation. Many of the SCADA systems offered on the market have drawbacks: 1. The systems or parts of the systems include software with closed source code. This can lead to non-adaptable systems, impossibility to change features and hard-coded parameters and/or functions, communication protocols, along with the adaptation of the system to various external systems, IEDs (Intelligent Electronic Devices), etc. 2. A software architecture, based on cyclic polling of events and on a sequential execution of the application tasks. This approach means that all the tasks have to run cyclically regardless of whether they are actually needed or not. On the other hand, the polling tasks have to run permanently in order to avoid loss of information. This is inefficient. 3. Non real-time databases are used. Their response time is not determined and this can significantly lower the reaction time of the system, turning it into non real-time system. 4. Lack of approaches for abstract modelling of technological networks results in the impossibility to implement many algorithmic functions. As a result the occurrence of many process data changes and/or events in the controlled objects in a short period of time, the system may lose information and/or leave the real-time mode. The Bulgarian company's technology addresses these problems through the development and production of automation systems for control of: - Power distribution networks in energy sector - SCADA systems; - Centralized train Traffic Control in railway – CTC systems; - Smart Grid systems; - Energy management systems (EMS); - Industry automation etc. The company develops internally the software, implemented in its systems and bears full responsibility for its operation. The systems include many modern technologies, such as: - Software structures based on “event driven architecture”; - Real-time databases for different types of automation objects; - Communication software according to the established in Europe communication protocols; - Communication software based on the most used fieldbus protocols; - Graph-based modelling of technological networks, like power distribution networks, railway track networks etc. - Graph theory based algorithms and appropriate software solutions for realization of diverse functions over the technological networks like: o topology calculation; o interlocking conditions determining and calculating; o flow distribution; o routes calculating; o schedule optimization etc. Based on the company's system the company has realized till now: - 8 SCADA systems including over 80 substations on 220/110/20/6.3 KV, equipped with their own and/or foreign Remote Terminal Units (RTUs), relays, power quality meters. - Automation systems for supervising and control of 8 underground stations, including the power

substations as also diverse technological facilities in the stations. - Energy management system, which controls over 1500 energy meters and other measurement devices. - Centralized train control system for supervising and control of 16 railway stations. - Computer based railway automatic blocking system. The company seeks cooperation with European partners through commercial agreements with technical assistance and through technical cooperation agreements. The cooperation aims at implementation of the technology by the partners with the long-term technical support of the company. Joint development and implementation of new systems for power distribution in the energy sector, centralized traffic control in the transport sector, energy management systems, industry automation and smart grids systems is also of interest.

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