Scientific Committee: Software & Information Technology

Research Work Title

Native SCADA Systems for Energy Distribution Networks Management

Executive Organization

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Abstract

SCADA systems have been introduced to the world since the 1960s. This technology has played a very important role in managing and controlling the supply chains and distribution networks, including energy and water. In Iran, for more than three decades, SCADA networks have been established for the upstream points of the gas and electricity grids in which foreign equipment has been used. Due to their dependence on the foreign currency and expensive equipment, energy distribution networks do not fully have an industrial automation technology or, in other words, are not intelligent. However, in recent years, some equipment of these networks such as RTU have been localized, but not all. Riz Sazgan Takin Company has conducted a step-by-step research and developed industrial prototypes for a native SCADA system for about twelve years. In addition to localization, this company received the necessary product certification from the competent national and international authorities. The RTU used in this system, in addition to supporting the legacy and standard SCADA network protocols, also supports the Internet of Things (IIOT) protocols. This equipment is also fully programmable with PLC languages. Therefore, it can be easily used in large-scale projects based on the Industry 4.0 architecture such as smart cities, smart agriculture and smart irrigation projects.