Mission Statement SpiderControl

"We offer a tool for all requirements in the HMI (Human Machine Interfaces)environment:

We standardize the HMI development and integrate all associated tasks so that the customers can reduce their engineering effort in the project business, improve their profitability and focus on their core competence for the control of a machine or system."

Case Study: Paul Scherrer Institute Power To Gas

Power To Gas test facility of the PSI visualized with Web-HMI

The Paul Scherrer Institute PSI is the largest research institute for natural and engineering sciences in Switzerland. The pilot plant COSYMA implements a new power-to-gas technology, was built at PSI and completed in November 2016.

The production of renewable gas from biogas plants can thus be increased by 60%. This is possible thanks to the methanation of hydrogen using PSI's innovative fluidized bed technology. In the future, CO_2 will not be separated in a biogas processing plant, but converted to methane. The suitability for everyday use has been confirmed in a 1000-hour test run under real conditions.

This enables electrical energy to be temporarily stored in the form of gas: the direct methanation of raw biogas addresses the problem of producing excess electricity from renewable energy sources: by converting electricity into additional gas, the energy can be temporarily stored in the gas pipeline system and used when required .Power To Gas Versuchsanlage des PSI mit Web-HMI visualisiert
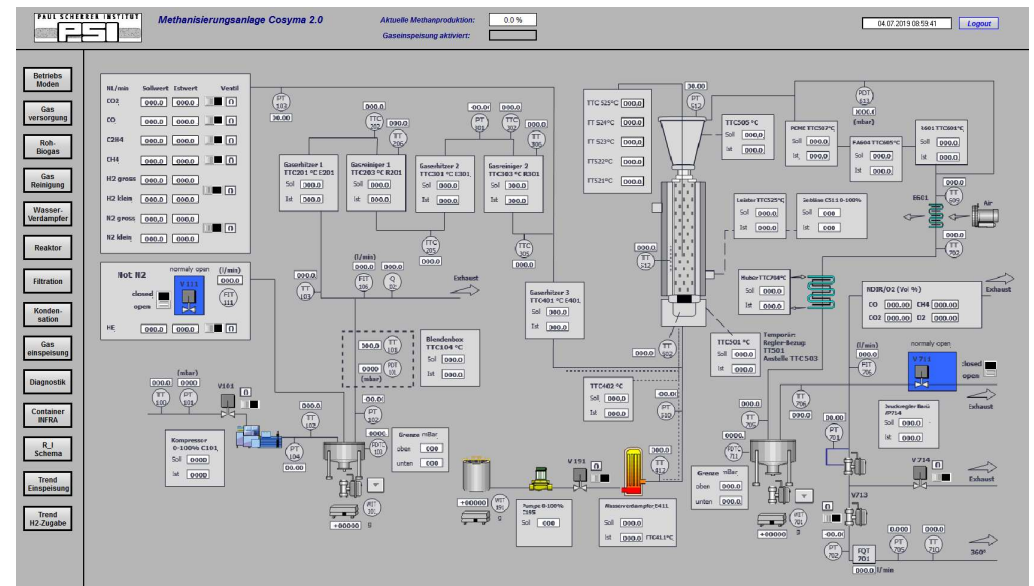
Case Study: Paul Scherrer Institute Power To Gas

The visualization of this system was realized with a SpiderControl SCADA server via HTML5. Since this system was not only intended to validate the new process technology, but was also used as a demonstrator for interested third parties, there was of course no way around a browser-capable visualization in HTML5 technology. The http reverse tunneling technology (VPI) integrated in SpiderControl also enabled secure and uncomplicated access to the system without having to purchase additional devices or security-related software. Interested parties could access the system directly via the Internet at any time and observe the ongoing process without the system ever becoming visible to hackers on the Internet.

Case Study: Paul Scherrer Institute Power To Gas

The PSI has been using SpiderControl as an HMI solution on different PLC brands for years. Over the years, many web HMIs have been used directly on various Beckhoff CX controllers via an embedded web server, which enables the implementation of very cost-effective systems, since no additional hardware is required and the Visu SW licenses are correspondingly cheap. Nevertheless, such an HMI offers all the functions that you are used to from much more expensive SCADA systems: historical trends, alarm lists with acknowledgment, vector graphics, creating your own macros, etc. This ensures low investment costs for the hardware and software components used. At the same time, however, the engineering effort can be significantly reduced:

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The HMI can be used both directly on a PLC and remotely as a SCADA on a host computer, so that the same tool can be used for small HMI projects as well as for large SCADA tasks. Existing HMI components and macros only have to be drawn once. Then there is the fact that SpiderControl can be used together with many PLC manufacturers. Since a Simatic PLC was used for automation in this test facility, PSI was also able to benefit from the modularity and portability of the tool here. Even if the most diverse PLC constellations are used, one can rely on a uniform HMI solution. Either a web server is used directly on the PLC, or the SCADA server is operated on almost any industrial computer: SpiderControl is available everywhere from Windows to Linux to Raspian and Android and the projects can be used on the required platform without any adjustments.