



Power Transmission Lines  
in Switzerland



## Customer Success Story

### Swiss Grid Laufenburg, Switzerland



DACF System Monitoring and Control

#### About Swiss Grid

Swiss Grid is an independent coordination company for the Swiss extra high voltage grid and performs services and specific tasks on behalf of the Union for the Coordination of Transmission of Electricity (UCTE, the organization that coordinates the activities of the European grid). Swiss Grid is independent from particular interests and organizations engaged in trading, supply and production. Based on its skills, tools and business information, Swiss Grid is ideally positioned to act as a trustee in the interest of the optimal organization of the Swiss and UCTE electric grids.

#### ICONICS Software Deployed

Swiss Grid selected ICONICS GENESIS32™ OPC Web-enabled HMI/SCADA suite including

GraphWorX™32, AlarmWorX™32, TrendWorX™32 and GenBrowser™ components. In addition, the organization utilizes ICONICS BizViz™ manufacturing intelligence and business visualization suite including BridgeWorX™ and WebHMI™.

#### Project Summary

Swiss Grid's main task is the security of the Swiss national transmission grid at any time, even under the intensive energy exchange between members of the interconnected European network. Swiss Grid has developed and established the concept of operational congestion forecast with the UCTE-wide Day-Ahead Congestion Forecast (DACF) module as a kernel. An industry pioneer in Europe, Swiss Grid fully automated the complex DACF algorithms and integrated them into its daily congestion management process. This automation is realized with the help of workflow-control software, BridgeWorX (with custom blocks specially developed for Swiss Grid), that is used to conditionally trigger the high-speed calculation engine, Siemens PTI PSS/E-based special development for Swiss Grid.

The calculations are based upon actual data from partners within the European interconnected network, while data presence and quality is continuously monitored with the help of an OPC-compatible File Monitor (also specially developed for Swiss Grid). Swiss Grid network engineers monitor and control the DACF process via the intuitive, graphical, GENESIS32-driven MMI, created in tandem with integrator, InfoTeam SA. National models are periodically downloaded from the FTP server using dedicated BridgeWorX workflows. Files are monitored

and new workflows are triggered that, in turn, execute specialized computation software. GraphWorX images help to visualize and control the current workflow states.

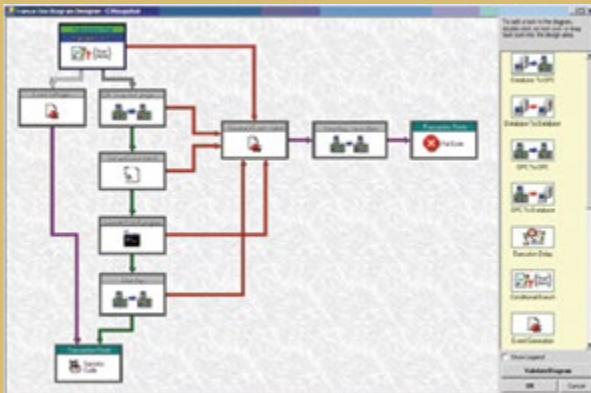
**Key Features**

GENESIS32 was selected for Swiss Grid’s DACF monitoring system due to its open nature, flexibility, and customization that allows prototype development with very low entry costs. BridgeWorX was chosen due to its ability to interface into technical processes (OPC), as the majority of other systems come from the purely business side. The software has a well defined programming interface that allows for developing complex and

network of power application systems, as well as with different national and international trading and scheduling systems.

**Conclusion**

Swiss Grid plans on extending their use of ICONICS software to data mining and enhanced Web utility. Through such working relationships, they are sure to remain pioneers in the European power industry.



*Transaction Diagram Designer in Use*



*Security Forecast Screen*

highly specialized custom blocks. Tight collaboration between the BizViz business visualization and GENESIS32 HMI/SCADA suites, ease of configuration, and superior graphical interfaces were also motivating factors.

**Benefits of the System**

ICONICS solutions provided Swiss Grid with a quick gain in productivity and drop in manipulation errors. Swiss Grid can now set their own level of interaction (from full automation to full operator control) within processes that must run 24 hours a day, 7 days a week, 365 days a year and that must be monitored continuously. ICONICS also seamlessly integrates with Swiss Grid’s

**Solutions Highlighted**



**BizViz**

Manufacturing Intelligence and Business Visualization Suite

**BridgeWorX**

Real-time Workflow Software for Data Bridging

**WebHMI**

Web-Based Real-Time Automation Software

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