

Control Microsystems Protects World Seed Vault for Future Generations

Located deep within an underground cavern on the arctic island of Spitsbergen, Norway, is found the Svalbard Global Seed Vault. The seed vault, selected especially for its permafrost and lack of tectonic activity, is home to millions of seed samples from around the world. As part of a Norwegian government initiative, these samples are kept preserved and secure at -18°C (0°F) in the event of a wide-spread catastrophe such as war, pandemic plant infection, climate change or other natural disaster.

Control Microsystems, global developer of advanced SCADA products, was selected to supply their SCADA host software, ClearSCADA, in the Svalbard Global Seed Vault. ClearSCADA is ideally suited to meet all the requirements for data integrity, availability and security in the state-of-the-art genetic store house.

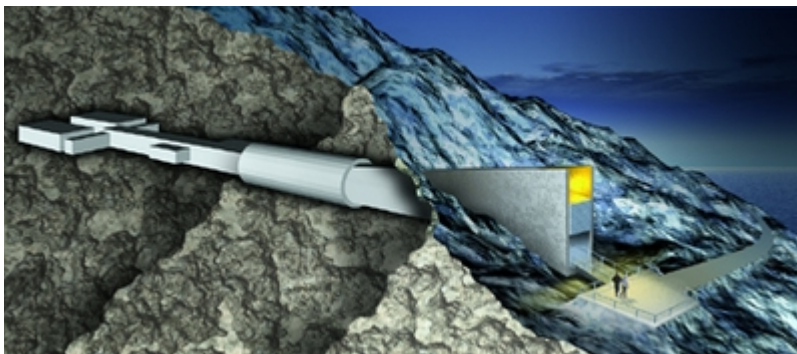
Given the seed vault's geographically remote location, maintaining a permanent on-site staff was not a viable solution; instead, a SAIA PLC-based system was selected to handle all operational tasks, including the cooling compressors, ventilation system, gas and temperature measurement and access door control. Any changes to the system have to be securely implemented on-line, with minimal operational interruptions, and done from an extended distance through existing communication infrastructure.

Spider Industrier AS, a Norwegian systems integrator specializing in industrial control, building automation and water treatment systems, was selected to develop, install and maintain the SCADA system including the critical software platform. It was determined that a single server installed at the Svalbard site would be an ideal solution if the software utilized an object-oriented database architecture and has the flexibility of OPC connectivity.

ClearSCADA handles all supervisory and control tasks such as data collection, analysis, reporting and graphic visualization, serving this up locally or remotely using a SAIA OPC protocol connection over TCP/IP to the SAIA PLC as the main communications backbone. The software's open protocol philosophy eliminates the need for a proprietary SAIA protocol driver.

Coordinated by Nordictron AS, the Norwegian ClearSCADA distributor, the Svalbard Global Seed Vault SCADA solution meets and exceeds all expectations. For extra peace-of-mind, ClearSCADA's built-in security function has been combined with Internet firewalls to ensure that only accredited personnel have access to the supervision system, and its ability to support local languages was a definite bonus for the Norwegian personnel.

For more information on Control Microsystems, visit www.controlmicrosystems.com



Drawing: Global Crop Diversity Trust