



A Rockwell Automation Company

Alberta Hospital Edmonton Power House PLC/HMI

The Client:

Alberta Hospital Edmonton (AHE) is a rehabilitation facility, which has a steam turbine co-generation

system capable of producing up to 1900kW.

The Requirement:

Alberta Hospital Edmonton controlled a governor on their generator using a combination of a Series Six Programmable Logic Controller (PLC), two Human/Machine Interfaces (HMI) and GE Genius I/O. The two HMI stations utilized a Genius Bus to communicate with the PLC.

With Year 2000 (Y2K) compliance concerns, Alberta

Hospital Edmonton asked Hinz to provide a recommendation and a plan for upgrade. Once the recommendation was provided, Hinz was required to perform the upgrade.

The Design Solution:

Hinz concluded that the largest concern with the AHE system was not Y2K related. Instead the concern was related to the amount of mature technology within the system. The Series Six PLC was on GE's mature status list, and parts supply was nearing an end. The programming computer that Alberta Hospital Edmonton owned to interface with the Series Six was also mature and starting to develop problems. The Genius cards used in the HMI computers were proprietary hardware and had some limitations. Alberta Hospital Edmonton was not pleased with the functionality of the existing HMI software.

With many trade-in offers available from GE, Hinz recommended AHE upgrade the entire system all at once (to get the best pricing). GE's Cimplicity HMI software was offered to AHE free in exchange for the hardware keys from the existing HMI. Hinz also recommended that AHE trade in the Series Six PLC for a GE 90/30 PLC complete with Ethernet communications. The new Cimplicity software was capable of communicating with the 90/30 using a standard computer Ethernet card (TCP/IP), which eliminated the need for proprietary hardware. Standard Hardware and protocol were preferred to help increase the longevity of the system.

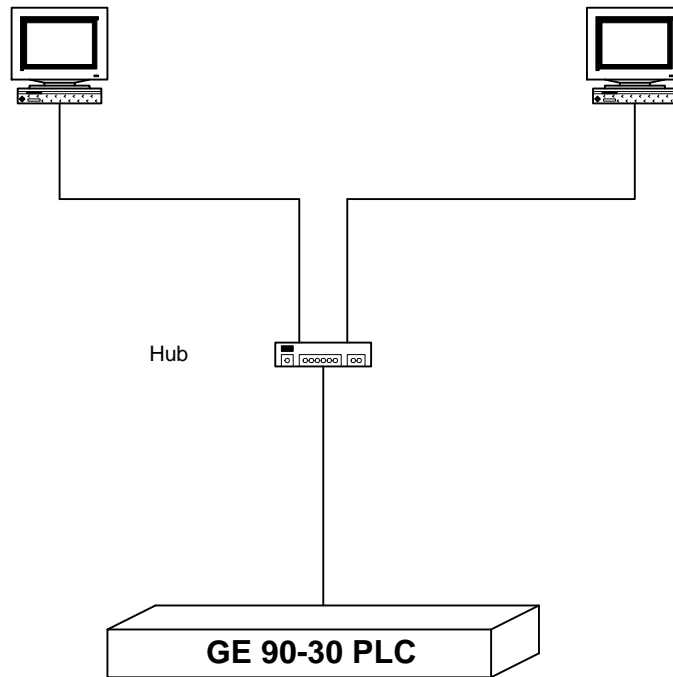
Softech's conversion software was used to convert the PLC program from Series Six ladder to 90/30 ladder. This software contributed to decreasing the Engineering time for the upgrade. The ladder program was then split into sub blocks to improve the readability of the program. Each sub block was documented to help maintenance personnel understand its purpose.

The HMI graphics were designed to look and operate similar to the existing HMI system. This was intended to eliminate training time for the operators. Hinz took advantage of improved trending, communication and graphics available in Cimplicity. The operators were able to enjoy the new improvements without having to learn any new complex operation concepts.



A Rockwell Automation Company

Alberta Hospital Edmonton Power House PLC/HMI



System Specifications:

HMI

- 2 Dell Pentium III 500 MHz computers; c/w 256 MB ram, 8 GB SCSI Hard Drive, Ethernet card, Windows NT ver. 4.01 and 20" Dell monitors.
- 1 - 32000 point Cimplicity Runtime system.
- One 32000 point Cimplicity Development/ Runtime system.

Network

- 10 BaseT Ethernet system.
- TCP/IP protocol.
- 10 station hub.

PLC

- GE 90/30 352 CPU with floating point math.
- Ethernet Communications module.
- Two Genius Bus Controllers

For further information or to contact a Hinz office near you, please check our website at:

www.hinz.com