



A Rockwell Automation Company

Pacifica Papers Refiner PLC Conversion Refiner PLC Conversion

The Client:

Pacifica Papers Inc. is a high-margin producer of value-added groundwood printing and communications papers including lightweight coated paper, soft nip calendared paper, telephone directory paper, machine finished hibrite paper and newsprint. The Port Alberni Mill has a reliable source of high quality wood fiber and access to a deep water harbor for trans-ocean

shipping. The Port Alberni mill manufactures paper primarily for magazines and telephone directories and has three paper machines with an aggregate production capacity of 426,000 metric tons of paper.

The Requirement:

Pacifica Papers, in its continuing efforts to upgrade its facilities, wanted to remove the existing GE Series Six PLC (used to control the refiner) from operation due to

the limited availability of spare parts and technical assistance. The refiner PLC controlled 160 Genius I/O blocks spread over eight Genius Buses.

The Design Solution:

The existing Series Six system was replaced with a GE 90/70 PLC while using as many of the original Genius I/O blocks as possible. Eight Genius Bus drops were used for the overall control of the refiner process. One of the biggest challenges was due to the length of time that the Refiner control system had gone through little or no maintenance. This meant that documentation and drawings relating to the process were not kept up to date. An audit by GE and Hinz was required to identify the number of Genius field I/O blocks and the configuration of the buses. Once the quantity and type of Genius blocks were determined, the required firmware upgrades were calculated. The difference between the 90/70 Genius Bus Controller and the Series Six Genius Bus Controller, dictated that a number of Genius I/O bases had to be replaced in order to ensure hardware compatibility.

The Series Six program was converted using SofTech's GETools conversion software. An extensive review of the Series Six program was required due to the large number of Genius modules that were addressed in the Series Six as auxiliary I/O and would need to be addressed as real-world I/O in the 90/70 program. A variety of conversion factors needed to be taken into consideration while setting up

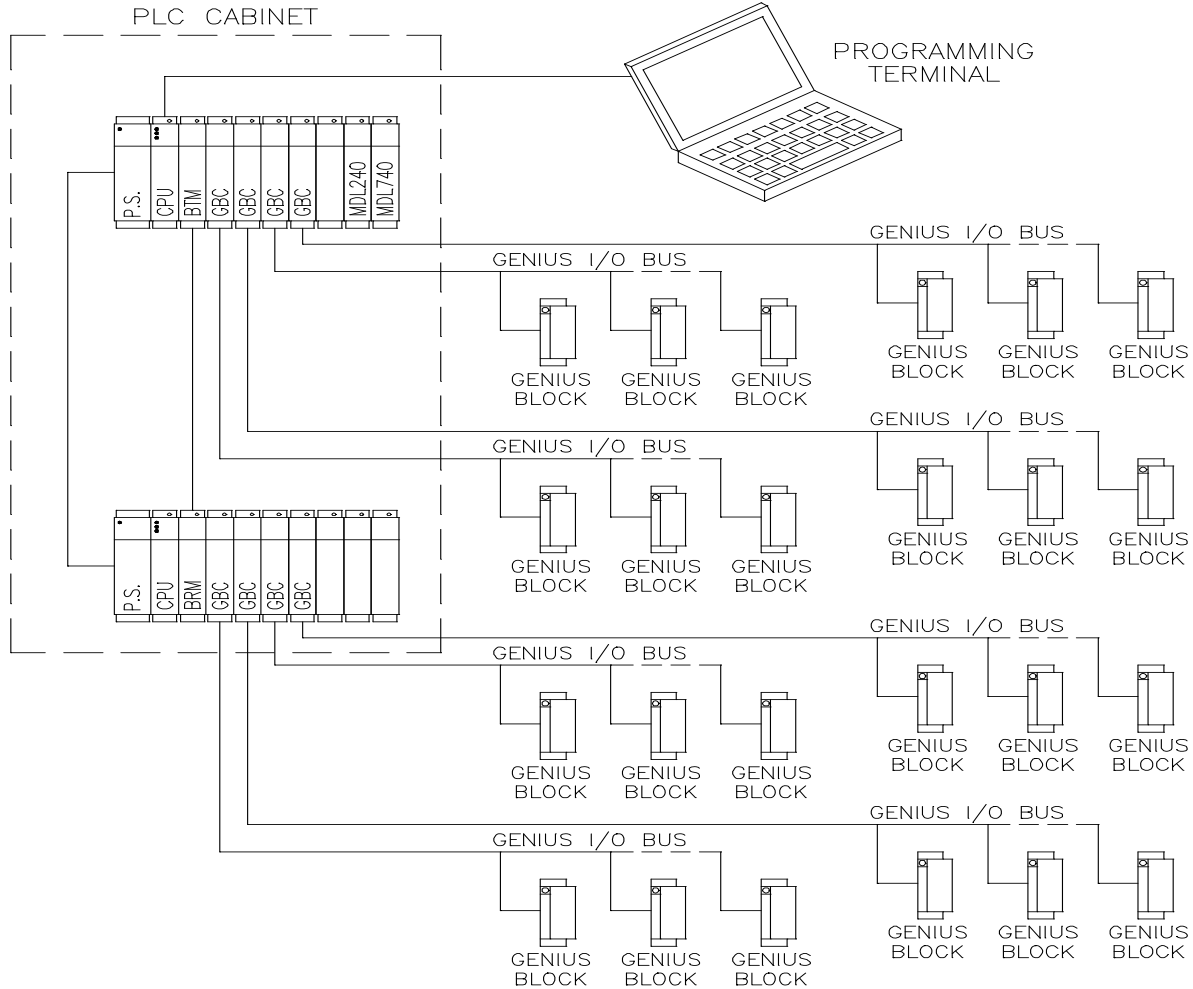
the conversion. Special attention was required when mapping auxiliary I/O and analog signals. Once this had been completed the conversion software handled the PLC conversion flawlessly, converting all of the logic that directly transfers to 90/70 equivalents with out any problems. Logic rungs that do not have an equivalent instruction in the 90/70 processor are flagged for review. The programmer converts the flagged rungs of logic manually for completion of the conversion process.

During the changeover the existing Series Six PLC and its I/O rack were removed and the new 90/70 rack was put in its place. The amount of wiring required was minimal since the connections to the Genius I/O require only two wires per bus controller. Once the Series Six Genius I/O was changed over to 90/70 Genius Bus controllers, the network reinitialized. A small handful of blocks needed to have their addresses reentered using the GE handheld Genius Bus monitor. After this was completed all I/O blocks were reporting and the processor was turned to run. The system ran perfectly from the start and not one single change to the converted program was necessary.



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System Specifications:

- GE 90-70 IC697CPX782 processor
- Conversion of GE Series 6 PLC program to GE 90-70 PLC program
- 8 Genius Bus Controllers

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

www.hinz.com