



A Rockwell Automation Company

DMI (Daishowa) - Peace River Pulp Division Sample of Genius I/O Configuration Reports

The Client:

Daishowa opened this pulp mill in 1988. The plant provides 1,200 metric tons per day of softwood and softwood/hardwood blended pulp using a new “kraft”

pulping method. The mill has two main production lines to facilitate maintenance work and stabilize plant operation.

The Requirement:

The mill has over 800 GE Fanuc Genius I/O blocks and 90 Series Six Bus Controllers installed throughout the plant. Each block is individually configurable. The mill has about thirty electrical and instrumentation maintenance persons on staff. The maintenance personnel are responsible for equipment changes, repairs, modifications to plant controls and associated configuration changes to the blocks. Sometimes a block configuration will be altered and maintenance records will not reflect the new configuration. This happens especially when new members of the maintenance group have made modifications or if people are scrambling during a shutdown.

It was desirable to provide a method to extract the block configurations throughout the plant, combine

them in a conventional database structure, and generate some meaningful reports. This would require a maintenance person to use a GE Fanuc handheld monitor and manually connect to a bus and page through each block and copy down each configuration parameter. This data would be used to generate reports which would then be sorted in a manner to allow maintenance personal to note additional blocks or configuration changes. It would be desirable to query the database specifically for unusual configurations and provide a “hot list” of suspect blocks for the maintenance personnel to check.

The Design Solution:

Hinz has developed some special application software to operate in conjunction with a GE Fanuc PCIM (Personal Computer Interface Module) to interrogate all the blocks on a genius bus and download their configurations. The PCIM is a GE Fanuc product specially designed for direct connection to an operating Genius bus LAN. The application software was written specially for the PCIM to gather Genius block configurations. This is connected to the Genius bus, just as the handheld monitor is connected, and the application program prompts for text descriptions of the PLC and bus names, then retrieves configuration information for all blocks that are on the bus. The configuration information for all blocks is downloaded and written to a database file in a few seconds. The connection is then moved to the next bus and the process is repeated for all Genius buses in the plant.

All the mill PLCs (over 800 blocks) were collected in about three hours. The various database files were merged into one large database and the following series of reports were generated:

- Block by Bus PLC Point Configuration Report
- Raw Data Block by Bus by PLC Report
- Point Configuration by Quantity Report
- Block Model & Firmware Report
- Suspect Block Configuration Interpretation and Recommendation
- Any GE Genius Bus Configuration

