

JUICING UP HMI PERFORMANCE WITH ACP THINMANAGER

CLIENT SUCCESS SNAPSHOT

Polytron, Inc. jumped in to help a major juice processor and bottler resolve hardware and software issues with approximately 100 Human Machine Interface (HMI) terminals at their facility. The bottler found that maintenance and replacement of failed computers, required software updates, and the multitude of applications, resulted in production downtime and overall inefficiencies.

Hardware and software complicates life on the plant floor - Environmental conditions on the plant floor and the heat generated by each individual computer caused the HMI computers to fail frequently, compromising the manufacturing plant where system uptime is critical. When an HMI computer hardware failure occurred, plant maintenance personnel would spend hours setting up another computer to replace the one that failed.

To complicate the hardware maintenance task further, the HMI computers had been installed and replaced over many years which resulted in various versions of computer hardware being used. In addition, these computers would typically need to be housed in an enclosure which would limit the type of replacements that could be used, and further add to the problem of effectively dissipating the heat they generated.

Over time, the software challenge became ensuring effective maintenance of all of the various software components required for each individual HMI computer. Installing software upgrades and operating system patches, as well as maintaining security and logins on each computer often fell through the cracks until a major problem occurred. Similar to the hardware, the software was usually different on most of the HMIs across the plant. The HMIs communicated with various plant PLCs, resulting in the I/O drivers needing to be individually configured on almost every HMI. Keeping proper backups for all of the different versions of HMI applications and corresponding I/O configurations, along with knowing the location of each corresponding computer, became critical.

ACP ThinManager thin clients offers opportunities and solutions

When a major plant expansion project for a new line was being implemented, the manufacturer decided to utilize thin clients managed by ACP ThinManager for their HMI system, eliminating most of the issues. Arista thin clients, with no hard drive or cooling fans, were used. The thin client hardware does not require the regular hardware upgrades of a typical PC. Polytron, Inc. configured the ACP ThinManager Platform for redundancy so that the HMIs would continue to operate on the thin clients even if a server failure occurred. With ThinManager, the HMI touch screens and user login security became simple set up tasks which could now be centrally maintained.

Along with the ThinManager platform, Polytron used Wonderware ArchestrA to provide centralized management of the PLC I/O drivers, application development, and data logging. All of the InTouch HMIs on the new line were designed to run the same InTouch application, making the application more flexible and easy to maintain over time. Each HMI station needed to be configured differently so individual operators could see the complete line, but only control the equipment adjacent to their HMI station. Although all the HMI clients run on a single server computer, the unique HMI thin client IP address is available to the InTouch HMI software so the application can tailor itself to each HMI location. Upgrading software and installing patches can now be managed from the terminal servers rather than having to go to each physical HMI station.

The new production line has been a major success for the plant, and ACP ThinManager thin clients were an important part of that solution. Going forward, the plant has plans to retrofit the rest of the facility with the ThinManager & ArchestrA based solution in order to extend and leverage these benefits across their operation.

