

Case Study:

Special Features for an Outdoor Kiosk Enclosure

Situation

In early 2000 Cytronics Technology was competing for a contract to supply an outdoor kiosk system to startup company BillBoard Video. Market testing with a rough prototype of the system had indicated a very attractive increase in convenience store sales as a result of placing the kiosks on top of gas pumps. Hunt Oil was close to committing to deployment of the new system at its Travel America service stations nationwide. The system had to handle harsh temperature ranges and the allowable hardware cost was limited. Having made it to the final round of vendor selection, Cytronics discovered it was on the verge of losing the contract to another vendor's industrial PC product because of the temperature range issue.

Assignment

The chassis manufacturer working with Cytronics on the bid asked me to enhance the product design to win the contract.

Actions

- ✓ Applied automation techniques to control electric heaters and cooling fans as needed to regulate the kiosk enclosure operating temperature.
- ✓ Created an innovative link between the kiosk outdoor keypad and the main computer to eliminate the need for Cytronics programming staff to rewrite software they'd already developed and tested.
- ✓ Developed a method to make temperature data available to the main computer for sale to cable weather services.
- ✓ Implemented a switching function allowing the main computer to control display backlighting and lengthen the life of expensive backlights.
- ✓ Added an audio amplification circuit improving the kiosk sound.
- ✓ Implemented a proximity detector allowing the main computer to enhance the product's impact and effectiveness by synchronizing the start of the promotional program with the arrival of a customer in front of the kiosk.

Results

Cytronics won the contract with BillBoard Video. Hunt Oil contracted for systems at 600 Travel America locations pending a successful test installation to demonstrate successful operation in harsh weather conditions. A complete system was installed at a station in Houston where it passed Hunt Oil staff's evaluation and signoff process.