Case Study

KELTRON

United States Military Base FACP Monitoring with Tones Transmitters and Annunciators

The original application was described simply as "monitoring several remote fire alarm control panels on an overseas United States military base and providing multiple remote annunciators". Keltron planned to provide an alarm monitoring system using home-run EOL resistor technology and hardware-driven remote annunciators and then the "Oh, by the way" message came.

The challenge

"Our communications are via microwave and the remote annunciators require two-way communication and system interaction". We needed to re-think this project and we devised a solution to manage its unique requirements.

The solution

Keltron's DMP704 compact alarm monitoring system with home-run EOL resistor input cards provided the answer to the problem. While some existing fire alarm control panels (FACPs) could be hardwired the remote FACPs, reachable only by microwave, were monitored individually with Keltron's Tones transmitter modules - 3086-1 - that are voice grade telephone line-compatible, including fiber optic lines. Tones audio output is microwave compatible and the microwave transmitted audio output of each 3086-1-transmitter module is fed into a dedicated 3090D tones receiver module. This configuration provides an EOL resistor output that is monitored directly by the Keltron DMP704 alarm receiver. For this project, each remote FACP was monitored using a 3086-1 tones transmitter and a 3090D tones receiver as a pair.

To complete this project, Keltron provided remote annunciators that are driven via RS232 two-way communications using leased line modems. This configuration extended the allowable communication transmission distance and with the modem output, provided microwave transmission compatibility.

Each annunciator is connected to the Keltron DMP704 through it's own serial communications port, enabling each annunciator to operate independently and in the manner prescribed for that particular location. This configuration also enables annunciator interaction with the system as required by the user. An example of differences in annunciator operation would be the ability to individually perform an annunciator-reset function from two of the three supplied remote annunciators. The third annunciator would be completely under system control.

Keltron supplied both graphic and tabular annunciators for this project. The tabular annunciator is used to display a secret portion of the base without revealing the location, layout or content details. Variations of this configuration include the number of annunciators and the differences in their operation.

Keltron develops and manufactures universally-compatible, UL listed life safety event management systems for the municipal and proprietary markets. Solutions include Ethernet signaling systems, active network radio systems, distributed multiplex systems, digital communicator/receiver systems, and direct wire systems. This document is not intended for installation or maintenance purposes. All specifications are subject to changes without notice. For more information visit www.keltroncorp.com or contact us at 781-894-8710.