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In My Opinion...

Dean Says:

The Controversy Continues— Part 4

For the last three issues, I've written about one aspect of NFPA 72-2010, *National Fire Alarm and Signaling Code*®, that connects this edition with all previous editions: controversy regarding certain requirements within the *Code*. This same controversy continues, now that the National Fire Protection Association has released NFPA 72-2013.

This particular controversy continues to plague Authorities Having Jurisdiction as they try to sort out the proliferation of alternative service providers offering telephone services that may also transport alarm signals.

In the late 1980s, word reached us at the insurance company where I worked that a fire in an industrial park in central Texas had disclosed a failure of the central station signaling system because the telephone circuit had no standby power. As a result of the Modification of Final Judgment (MFJ) in *United States vs. AT&T*—completed in 1982 and implemented in 1984—the seven Regional Bell Holding Companies had begun to drift away from the rigid standards of implementation of deployed telephone

service. The construction of the industrial park where the fire occurred had taken place two years before. Thus, the Local Exchange Carrier (LEC) had installed the telephone service for the complex using new technology and new installation standards.

Basically, the LEC had used an optical fiber multiplex system to connect each field-located transponder in the complex to the nearest LEC wire center. "Standard" copper telephone pairs extended from the transponders to the Standard Network Interfaces at each industrial building in the park. However, the transponders had no standby power.

A relatively small fire occurred in an industrial building. The responding public fire department asked the public utility power company to shut down power to the complex. The power company chose to do this at the main electrical substation for the industrial park. Deprived of utility power, and with no standby power, the transponders went off-line, thus disconnecting telephone service to the buildings.

While the fire fighters attended to the blaze in the first building, a fire occurred in a unoccupied warehouse building on the other side of the industrial park. With no telephone service, the central station signaling system could not transmit an alarm signal. The fire burned for an extended period of time before passersby noticed it and drove to the location of the first fire and notified the fire department personnel.

Failure of a central station signaling system protecting a building and contents worth \$20 million posed a very serious problem. I was sent to Texas to investigate. My investigation disclosed the weak link in the communications pathway: no standby power for the optical fiber multiplex transponders.

The LEC insisted they had no requirement to provide standby power to field-located equipment. They no longer had to abide by the very strict installation standards of AT&T.

As the insurance company providing coverage for the building, we did not take this disclosure well. Nor did the Authority Having Jurisdiction. He suddenly discovered that hundreds of new industrial buildings in this booming area had central station signaling systems that could not transmit during a power outage. Yes, the fire alarm equipment in the building had standby power. And, yes, the equipment at the central station had standby power, but the communication pathway provided by the Local Exchange Carrier did not have standby power if it relied on field-located optical fiber multiplex transponders.

As a major Highly Protected Risk (HPR) insurance company, we immediately issued a bulletin to all of our personnel, as well as to our member insurance companies, and the insurance brokers and agents who serviced our insured properties. I also brought this problem to the attention of the NFPA Technical Committee on Central Station Service, which I chaired. And, I brought it to the attention of the American Insurance Association's Advisory Engineering Council's Committee on Alarm and Signaling Systems.

Shock flashed through the HPR insurance industry and the ranks of the Authorities Having Jurisdiction. We all depended on the black box of the public utility telephone company to provide extremely reliable signaling transmission service. Would these changes to the very nature of the telecommunications industry adversely affect that reliability? The answer: Yes!

I will continue this discussion in the next issue of *TM-WSR*. □

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