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# CASE STUDY: MYSTIC RANGER STATION

*Customer Emergency in the Badlands*

## About the Customer

The Mystic Ranger Station is located in Rapid City, South Dakota, just off HWY 16 in the Black Hills National Forest. It is operated by the U.S. Department of Agriculture Forest Service.



The Mystic Ranger District, or Central Zone, is adjacent to Rapid City, the regional trade center and second largest city in South Dakota, encompasses approximately 350,000 acres interspersed with hundreds of private property parcels and multiple fire departments.

## Customer Requirements

The Forest Service needed emergency service to bring their building automation system back into operation after a lightning strike destroyed their JCI Metasys NAE supervisory controller, leaving them without visibility into the status of their BAS and no scheduling capability. They didn't have the budget, or the time, to replace the entire building automation system.

Temperature Technologies had done some small projects successfully for the Forest Service in the past, they were local, could respond quickly, and they are a Minority Owned small business which streamlined the Government contracting process.

In addition to the failed NAE, the existing BAS consisted of approximately 45 N2 field devices controlling VAVs, Power meters, AHU controller, and Heating and Cooling Plant controller. The project concept was

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to retain the field devices that were still serviceable and provide a seamless integration to a Schneider Electric AS Server which would replace the JCI NAE.

To accomplish this integration, they needed a product that would be able to talk to the old JCI system (N2) field controllers and convert them to BACnet enabling it to work with the new Schneider Server.

Before this Project, some of the Temperature Technologies team had met the S4 group at a Trade show, seen and witnessed the product, and were very pleased with what they'd seen. This customer needed emergency help, and Tem-Tech knew who they needed to talk to. The S4 Group solution was the only approach considered

The integrated solution consisted of the S4 Open: BACnet N2 Router, Schneider Electric AS-P, Schneider Electric MNB-1000 (to replace the one N2 field Controller that could not be salvaged).

The project required a N2 Router that supports up to 64 N2 devices, no upstream N2 support, and 1 N2 bus. The upstream N2 support would have allowed the NAE to coexist with the new Schneider Electric head end. But, since the NAE was destroyed by lightning, this feature was not needed.



A critical step in the integration process was using the S Squared Innovations S2USB485 for testing and troubleshooting the legacy N2 Bus and using the JCI M-Tools to validate the integrity of the field devices to confirm that none of them were damaged by the lightning strike. A lot of good information about the configuration of the legacy systems was obtained by this process which provided a baseline for moving

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forward. It was also determined that one of the legacy devices was not serviceable and needed to be replaced with a Schneider Electric device.

## **Outcomes**

The Customer was very pleased with the integration, the system has been running for about a year without any issues. The customer commented that all their goals were met including Temperature Technology responding very quickly to their emergency situation.

Temperature Technology commented that a part of the project success was that S4 delivered a trouble-free product and provided great customer service. Their knowledge of both the Schneider Electric technology and the legacy Metasys N2 system helped them to deliver an expedited solution. The success of this project built a strong relationship with the Forest Service resulting in an ongoing strong business relationship.

## **About Temperature Technology**

Temperature Technology, Inc. is located at 2809 Plant St, Rapid City, SD 57702. Service provider for indoor temperature controls with 38 years in business. We install, maintain & repair temperature controls for commercial structures. Tem-Tech specializes in, boiler repairs/maintenance, access controls, refrigeration, & have a full-service department.

For more information contact: Kellan Pfleger at [KellanP@tem-tech.com](mailto:KellanP@tem-tech.com)