CASE STUDY –

MOBILE SPACE COMMAND CONTROL

Integral Systems teams with Network Integrity Systems to meet Air Force combat zone mobile requirements

Situation

Integral Systems – a leader in the secure management, delivery and distribution of data and information from space into networks – is in the final stages of developing a satellite ground station system that will be used by the U.S. Air Force Space Command. The system needed to be designed in such a manner that it can forward deploy into a combat zone and ensure that Air Force satellite links are protected while reporting status of these communications in a fail-safe communication transfer.

According to Angie Pearman, Lead Systems Engineer, the challenge was that in a combat zone, all network transmissions need to be secured, even simple connectivity between an antenna and its control system. In addition, the sites can be deployed in a forward position and are designed to be unmanned. Therefore, the security method chosen had to be workable within that environment.

Solution

After evaluating various security approaches, Integral Systems chose the INTERCEPTOR Optical Network Security System from Network Integrity Systems. The solution was proposed by Communications Supply Corporation (CSC) under its SecureIT program, which focuses on complete solutions for secure network infrastructure.

INTERCEPTOR was a good fit for the mobile command for several reasons. First, it easily integrated into the system design, with only a few minor adjustments required for the physical plant cabling needed to secure the network.

According to Pearman, the biggest challenge with this mobile unit was that the location would be unmanned. While there would be personnel in close proximity, no one is planned to be permanently stationed onsite. Therefore, when considering an alarm system as the network security method, false alarms could not be tolerated since alarm response would be difficult.

Integral Systems chose the INTERCEPTOR because of its event discrimination technology. Specifically, INTERCEPTOR learns the ambient state of the network and differentiates between benign events and real threats. If an INTERCEPTOR alarms, there is a problem affecting the network infrastructure.

A further challenge was that the mobile unit could be relocated to another unpredictable environment. Because of INTERCEPTOR's ability to quickly re-learn the new environment, it was considered well suited for that challenge.

In the end, the INTERCEPTOR met all needs related to ease of integration, performance and budget. Since it was already Air Force approved, the decision was easy, according to Pearman.

"We were introduced to the INTERCEPTOR and its technology at the time we began to work on the physical security. We found that it met all of our needs." Pearman said.

Results

The anticipated outcome is that the INTERCEPTOR will fulfill all of the physical security requirements for the project and will perform at a high level.

"Without the INTERCEPTOR, this mobile unit would have been much more difficult to design and implement, per the security requirements," Pearman said. "We feel the INTERCEPTOR was a life saver in this project, as it helped us overcome a major obstacle in our deployment and quickly address a relatively new security need."

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-Angie Pearman, Integral Systems

Network Integrity SYSTEMS

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