

# Upgraded MaxView® improves ground station control at Universal Space Network

## Challenge

Universal Space Network (USN) has remote ground station locations in Alaska, Hawaii and Australia, providing ground services and support to satellite operators. These remote sites are controlled from network management centers in Horsham, Penn., and Newport Beach, Calif.

Through an acquisition, USN acquired an additional ground station in Poker Flat, Alaska. This new site has two antenna systems, one being monitored and controlled by the Rockwell Collins MaxView® Monitor & Control (M&C) software and the other with a competitive M&C product. Both of these systems and a third legacy M&C system sit side by side in USN's suburban Horsham, Penn., office, requiring an operator to learn, understand and utilize three different protocols.

USN had two challenges. First, each commercial and government satellite in orbit has unique ground equipment settings that must be configured via monitoring and control scripted sequences. USN requires a system that can automatically set up and verify the ground station equipment configuration prior to each scheduled contact with a satellite.

Second, USN was studying the M&C systems of all its sites, looking to standardize on a product that was versatile, user friendly, user configurable and cost effective.

## Solution

- ▶ MaxView solved the first challenge by providing schedule-driven automation, which determines the exact time the satellite is coming within range, known in the industry as a “pass.” MaxView then executes sequences to configure 10 to 15 ground devices so that the antenna and devices are ready to track the satellite and provide the ground services that allow customers to monitor and control their satellites.
- ▶ “MaxView configures the equipment needed to track the satellite, verifies the configurations were set properly, schedules the antenna to take support, resets the equipment when the pass is complete and then forwards the data to our customer,” says Steve Voglewede, senior software engineer at USN. “This automation reduces errors and improves overall performance of the network.”
- ▶ Regarding the second challenge, Voglewede states, “We quickly realized that MaxView was the best product for USN, as we compared systems side by side.”



On these displays in Pennsylvania, the USN team views MaxView as it monitors and controls the earth station in Poker Flat, Alaska.

### Challenge

*Using manual interaction to configure continually changing ground-device settings for multiple satellite systems can be labor intensive and potentially error-prone.*

### Solution

*MaxView automated ground-device configuration while also managing system data gathering and dissemination. It provided setup verification, support scheduling, system resets and other performance or operational services.*

### Benefit

*By increasing network automation, MaxView reduced labor costs, setup time and human error. The system's added efficiencies can enable greater customer volume.*

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## Benefit

MaxView® increases operational efficiency because automation is set up on the front end – making the configuration less complex for the operator.

MaxView automatically sets up the satellite pass, whereas other M&C systems installed at USN tend to be more labor intensive, requiring manual interaction with devices and systems. Because the process is automated, USN can take a pass with minimal controller input to improve reliability by eliminating manual steps used with other systems. This frees up time to take additional passes, which can translate into increased revenues.

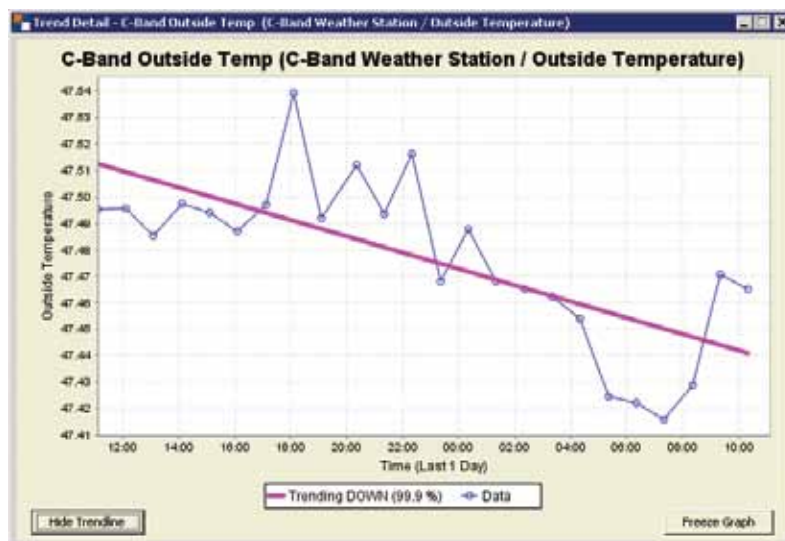
Because MaxView provides a top-level view of the entire network, it is easy for the operator to quickly understand system status and alerts. If there is a problem, MaxView alerts the operator, who can respond as needed.

Version 5 provides decision support resources through comprehensive reporting, such as ad hoc and scheduled reports. USN is interested in taking advantage of version 5's powerful trend detection capabilities. Since USN polls its satellite equipment 24/7, automatic trending of changing hardware and network conditions will help in troubleshooting issues and scheduling maintenance.

## Conclusion

Using Rockwell Collins MaxView software, USN can quickly and reliably schedule automated satellite passes, reducing manual intervention and human error. USN has just purchased another MaxView license to replace a second M&C system and is evaluating other sites for upgrades to MaxView as well. MaxView benefits include:

- ▶ Automated services
- ▶ Operational efficiency and reduced human error
- ▶ Reduced training and network downtime
- ▶ Increased network availability
- ▶ Comprehensive reporting
- ▶ Trend detection capabilities



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