

SATELLITE M2M COMMUNICATIONS REVOLUTIONIZING FIRE MANAGEMENT

The ability to reliably connect Machine-to-Machine (M2M) Networks in isolated locations and access all the data being collected is transforming the way companies operate in resource sectors. Increasingly, companies, organizations and government agencies operating in Canada's 8 million square kilometres, outside the range of traditional cellular and GSM networks, are tapping satellite solutions to drive profitability, effectiveness and performance. In the forestry sector, managers are adding satellite-powered M2M communications solutions to their operational toolkit and a range of innovative applications are emerging.

"In the past, there simply wasn't connectivity," says Wayne Carlson, president of Nupoint Systems Inc., which has developed a portable, affordable and satellite-driven IP-based Remote Viewer™ camera for fire managers. "With satellite technology, it's a brand new day for forest management."

THE BUSINESS CHALLENGE

Fire managers are constantly evaluating forests. For the most part, this involves flying by helicopter over areas identified for modified response or prescribed burns to visually monitor what's happening on the ground. Each flight can range in cost,

"IT WAS CLEAR TO US THAT THE GLOBALSTAR IP-BASED NETWORK WAS THE BEST CHOICE. IT ALLOWED US TO BUILD A PORTABLE, RUGGED, LOW POWER SOLUTION THAT IS BEING USED IN A WIDE RANGE OF APPLICATIONS IN HARSH REMOTE LOCATIONS WHERE CELLULAR COMMUNICATION IS NOT AN OPTION."
- WAYNE CARLSON, NUPOINT SYSTEMS

averaging anywhere from \$2,000 to \$5,000 depending on the distance. One Nupoint Systems customer already deploying the company's Globalstar-powered satellite transceiver in an M2M application, asked a game-changing question: "Can you integrate a camera with the Remote Connect™ (SD200-G) satellite terminal?" The answer: yes. The result: Nupoint Systems' Remote Viewer.

THE SOLUTION

The core technology inside the Remote Viewer is the Remote Connect (SD200-G) transceiver which is built around the Globalstar GSP-1720 modem.

"The major advantages of the Globalstar system over competing systems are its affordability, low power consumption and simplicity. It is an IP-based solution, which means we can use standard Internet protocols to transfer files," says Carlson. "Because we don't need to create a custom back-end, the applications are much simpler to implement. Our omni-directional antenna make installation easy, too. You don't need a radio engineer to set it up, a forest ranger can do it." How it works: The camera snaps the picture, the photo is stored in the transceiver, sent to Nupoint Systems' server and then emailed to the customer's smartphone, tablet or PC. That's it.



Nupoint Systems' Remote Viewer™

THE RESULTS

With the satellite-powered Remote Viewer, fire agencies no longer need to physically fly out to locations to monitor what's happening. If it is required to dispatch a crew to a location they will know the situation before they go.

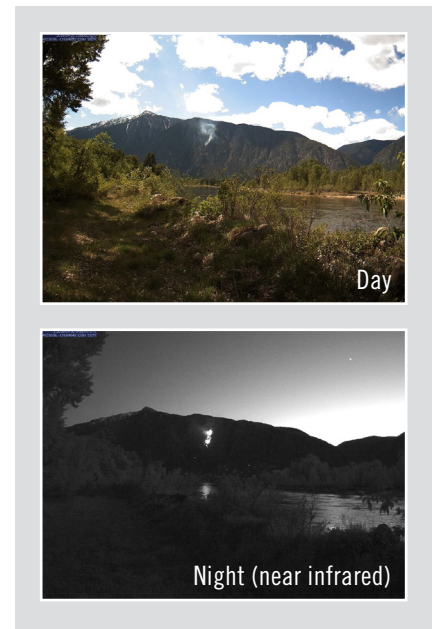
“Our solution draws very little power, it can run a couple of months on a battery” says Carlson. This not only saves costs, but maximizes operational efficiencies by ensuring maintenance resources are used when and where they are most needed.

Having the advance knowledge of what's happening in the field, means fire suppression crews can be sent out immediately and prepared for what they are going to find.

“It allows them to be more effective and productive while saving money,” says Carlson. “Last year, Alberta Wildfire was able to save the cost of deploying at least four helicopter flights because of the information provided by the Remote Viewer.”

And because the camera has near infrared capability, images taken at night can pinpoint the perimeter of the fire and identify from one night to the next whether it's expanding, something that isn't visible during the day. “Without the Remote Viewer, firefighters would have to fly in the middle of the night to get the same images, which is much more dangerous.”

“The opportunity for satellite technology is enormous,” says Carlson. “And, with the Globalstar footprint, we can go international. The sky is the limit.”



Images from Remote Viewer sent via Globalstar Satellite Network

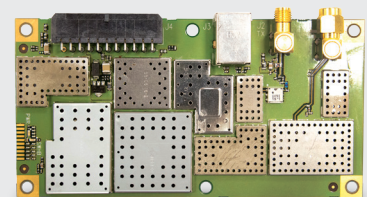
GLOBALSTAR GSP-1720 SATELLITE DATA AND VOICE MODULE

Mobile or stationary, the GSP-1720 helps you monitor, control or track assets remotely through the Globalstar satellite network – affordably and with low-power requirements. The duplex data modem enables full two-way data and voice capability, allowing the development of new and innovative tracking and monitor & control applications to full-featured fixed telephone service for remote areas.

For Supervisory Control and Data Acquisition (SCADA) applications, the GSP-1720 Satellite Data/Voice Module (SDVM) can provide either Direct or Dial-up Internet as well as asynchronous computer-to-computer connectivity. These options provide communications with land and marine-based equipment, while complementing mobile and stationary field solutions.

GSP-1720 applications include:

- SCADA
- Telemetry
- Remote Monitoring
- Environmental Monitoring
- Aviation
- Process Control
- Remote Diagnostics



For more information on **Globalstar** devices, visit: Globalstar.com