



Power and Device Management at Remote Telecom Sites

*Centralized data reduces energy
use and improves service quality*

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POWER AND DEVICE MANAGEMENT AT REMOTE TELECOM SITES

Centralized data reduces energy use and improves service quality

CHALLENGES

The national telephone company of Venezuela, Compañía Anónima Teléfonos de Venezuela (CANTV), provides all landline and mobile telephone service, Internet access, and data transport for a country of more than 28 million people.

Fulfilling this mission and meeting the growing voice and data use of a large population requires CANTV to maintain and expand a nationwide communications infrastructure of hundreds of communication towers, telephone exchanges, data centers, and other facilities.

Each of these facilities contains multiple subsystems needed for its operation. For example, a communication tower site includes tower aviation beacons, generators, and fire and intrusion alarms, while a data center includes network switches, servers, air conditioning systems, and backup power supplies.

Many facilities also include power analyzers to record energy consumption and to monitor voltage and other characteristics of the electricity supplied to that location.

CANTV faced the significant challenge of collecting this variety of subsystem data from all facilities, transmitting the data to its network operations center (NOC) in Caracas, and then integrating that data into its network management system (NMS).

These tasks had to occur as rapidly and reliably as possible. For example, if a power failure occurred at a communications tower site and the generator didn't start, it was critical that this information be received and acted upon immediately, so repair personnel could be dispatched to the site before backup batteries ran out.

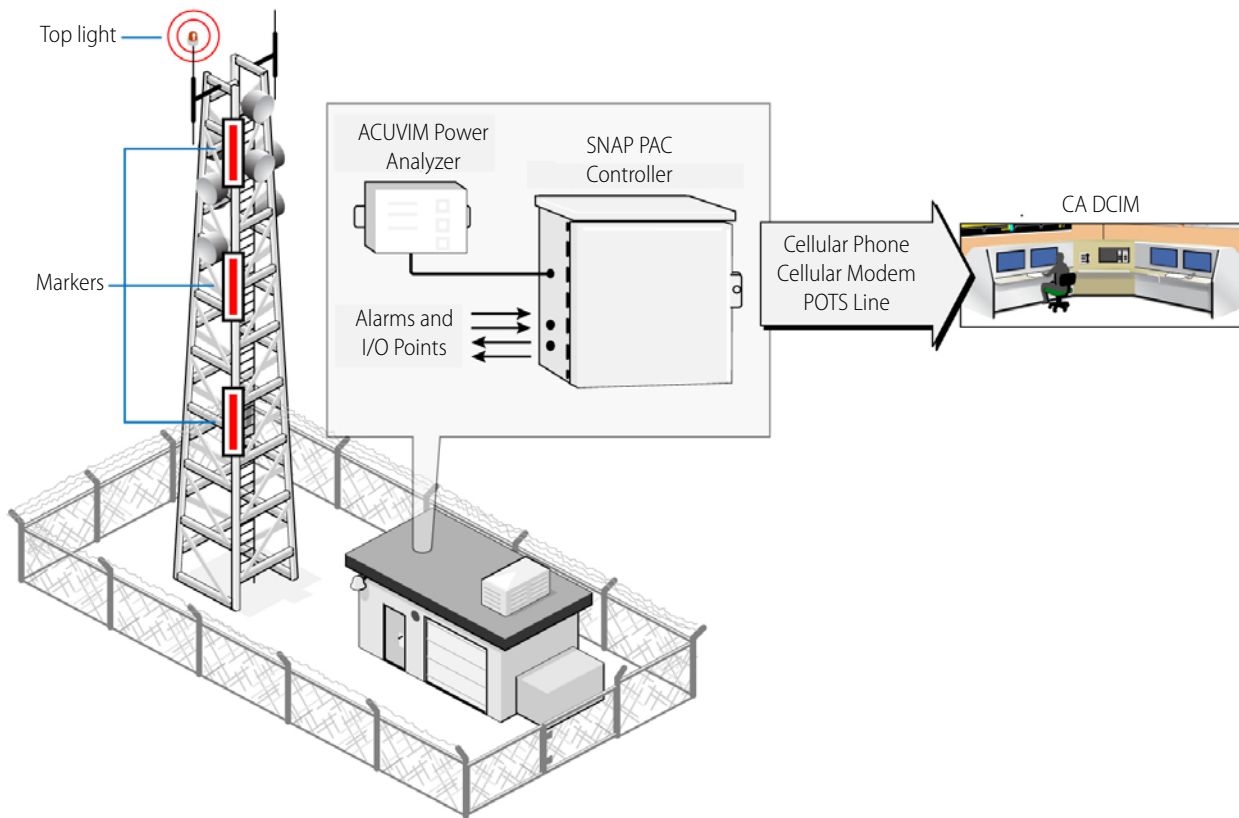
SOLUTIONS

CANTV met this challenge by installing at each remote facility a packaged system of Opto 22 SNAP PAC hardware developed by Florida-based Opto 22 distributor Optimize, Inc.



Each system includes a SNAP PAC controller, SNAP I/O modules for receiving digital, analog, and serial signals, plus power supplies, fusing, and electrical connectors. Status, alarm, and other messages from the facility's subsystems are received by the system and then forwarded over available telephone, Internet, satellite, or other communications links to the NOC in Caracas.

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CANTV, the national telephone company of Venezuela, installed a packaged solution using Opto 22's SNAP PAC System to monitor and manage hundreds of remote telecom sites.

RESULTS

Being able to access remote facilities and integrate subsystem data into its NMS gives CANTV several advantages.

First, the company can respond rapidly to alarms and incidents. Second, its ability to analyze historical data from subsystems has made predictive maintenance—identifying and fixing a problem before it occurs—a reality. And third, the company can accurately track energy consumption and the reliability of the power provided by energy suppliers for each site.

The company's ability to analyze historical data from subsystems has made predictive maintenance—identifying and fixing a problem before it occurs—a reality.

ABOUT OPTOMIZE

Located in Miami, Florida, Optomize is Opto 22's International Distributor for Venezuela, Ecuador, the Caribbean, and Central American markets. Optomize has over 20 years of experience with implementing Opto 22 products in successful applications in the Industrial and Telecom fields. For more information, contact Optomize at +1-954-349-1616 or visit www.optomizeonline.com.

ABOUT OPTO 22

Opto 22 was started in 1974 by a co-inventor of the solid-state relay (SSR), who discovered a way to make SSRs more reliable.

Opto 22 has consistently built products on open standards rather than on proprietary technologies. The company developed the red-white-yellow-black color-coding system for input/output (I/O) modules and the open Optomux® protocol, and pioneered Ethernet-based I/O.

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In early 2013 Opto 22 introduced *groov* View, an easy-to-use IoT tool for developing and viewing mobile operator interfaces—mobile apps to securely monitor and control virtually any automation system or equipment.

Famous worldwide for its reliable industrial I/O, the company in 2018 introduced *groov* EPIC® (edge programmable industrial controller). EPIC has an open-source Linux® OS and provides connectivity to PLCs, software, and online services, plus data handling and visualization, in addition to real-time control.

All Opto 22 products are manufactured and supported in the U.S.A. Most solid-state SSRs and I/O modules are guaranteed for life.



The company is especially trusted for its continuing policy of providing free product support, free training, and free pre-sales engineering assistance.

For more information, visit opto22.com or contact

Opto 22 Pre-Sales Engineering:

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