



Enabling Global
Connectivity

Innovative SCADA system upgrade enables real-time remote monitoring and control for 20 reservoirs in Peru

The AST Group's valued partner Procetradi was awarded the contract to provide new SCADA systems for a leading state-owned electricity company in Peru to improve operations and optimize their engineers time.

ABOUT THE CUSTOMER

Engineering company, Procetradi provides services for projects in the electricity and telecommunications sector. Their customer, a state-owned utilities company, owns two hydroelectric plants that make up the Mantaro Hydroelectric Complex.

THE CHALLENGE

The Mantaro Hydroelectric Complex is Peru's main generation centre, supplying over 18% of the demand of the National Interconnected System (SEIN) and 15% of the power, it is essential that operations run smoothly. Due to its position in the remote region of Huancavelica, terrestrial communication is either unreliable or non-existent.

Twenty of the river water reservoirs required a new SCADA system to enable the engineers to actively monitor, analyse and control the river water reservoirs operational data in real-time from the Control Centre located in Tablachaca.

THE SOLUTION

The team at AST supported Procetradi to deliver a solution that utilises the latest hardware and connects to the networks to deliver efficient connectivity. In remote regions, such as Huancavelica, due to inaccessibility to traditional terrestrial networks, satellite is the only viable option for a SCADA system to operate.

Hardware

The Hughes 9502 one-piece terminals were installed and operate on Inmarsat's BGAN machine-to-machine (M2M) satellite service – this terminal enables remote monitoring and works seamlessly with many M2M solutions. The decision to install M2M BGAN to BGAN configuration enables the twenty remote Programmable Logic Controllers (PLCs) to communicate data directly back to a SCADA server in the control centre for the team to monitor and take action remotely, instantly.

KEY FACTS

Resilience

Mantaro Hydroelectric Complex is Peru's main generation centre

Remote location

Satellite is the only viable option for a SCADA system to operate in remote regions

Remote terminal management

AST's IRIS remote terminal management solution enables real-time remote control of the satellite M2M terminals reducing travel required to site

Software

AST's IRIS remote terminal management solution enables real-time remote control of the satellite M2M terminals reducing travel required to site and provides the means to deliver a global solution through a single web interface via a clear, simple management tool. Without IRIS, diagnostics and network monitoring would be complex and time-consuming and would require engineers to physically visit the sites on a regular basis – saving time and expense.

The data is passed through AST's INTEGRA Network giving an additional layer of security and giving Procetradi the ability to identify, protect and filter any unwanted communication to or from the Hughes 9502 one-piece terminals.

THE BENEFITS

Secure access to the remote locations brings the ability to identify and detect service issues in real-time and establish or implement the best resolution from a distance – improving operational efficiency and positively impacting service delivery.

The benefit of the SCADA system being connected to Inmarsat's BGAN M2M satellite service will significantly reduce operational costs through reduced deployment of field engineers and improve the performance of the hydroelectric plant by helping to reduce response times to any issues or downtime.

The deployment of personnel to areas where the lagoons are located is a very high risk, having a satellite system of this type helps to safeguard the integrity of the personnel that would be needed to attend or monitor the status of the systems monitored by PLCs.

Communication

To segregate the client's data, AST created a closed communications group which allows for remote-to- control-centre communication and prevents traffic to flow over the Internet. Bespoke IP address assignment provided by AST's INTEGRA Network helped Procetradi integrate and expand end customer's IP network to remote sites on a simple and reliable way for increased visibility and control.

Support and training

AST's experts including our 24/7 global customer support team and dedicated account manager have provided extensive support to Procetradi on the hardware, network, airtime and online portal services in order to meet and exceed expectations and deliver a working solution on time and on budget.

INTEGRA)) **IRIS**))

KEY FACTS

Hardware

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Secure

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