RADIO
@work

Project: Power and Water's telemetry system
Application: Remote water monitoring and control

Pervasive Telemetry has filled the need of monitoring sites and gathering data over the wide area of communities in Australia's Northern Territory by supplying remote monitoring, control and telemetry solutions to Power and Water Corporation (PWC).

PWC provides electricity, water supply and sewerage services to almost 80,000 users across the state - an area of more than 1.3 million square kilometres.

It provides services across varying environments, from the tropics to the deserts. It is one of the largest businesses in the Northern Territory, employing over 1000 residents.

PWC Remote Operations is responsible for 72 communities and 33 outstations across the state. Based at its headquarters in Darwin, Katherine, Tennant Creek and Alice Springs, the many communities they provide services to are small and varied.

Accessible only by 4WD or light aircraft, the high cost of visiting these sites results in insufficient data being gathered for effective system diagnosis, infrastructure and maintenance planning.

While supervisory control and data acquisition (SCADA) is used extensively in urban areas, the high cost of installing these systems and bringing the information back for analysis from remote areas meant that PWC had to look at alternatives to get the information it needed quickly and cost-effectively.

By condensing traditional SCADA components into a single device using the 3G, GPRS or satellite data networks, Pervasive Telemetry was able to provide a remote telemetry solution otherwise out of reach. It specialises in small/medium remote monitoring, control and telemetry solutions in the form of AgentG2.

AgentG2 is a remote monitoring and control service which provides continuous, real-time monitoring and control of remote assets and infrastructure on a web browser or web-capable mobile phone. It provides immediate notification of out-of-range situations, security breaches and equipment failures.

The device was built using technologies more accessible and flexible than the proprietary technologies used by traditional SCADA providers.

By wiring in its existing pumps and level sensors into the AgentG2, it gave the company real-time 'situational awareness' of its asset states. A trial installation occurred just before Easter when reduced staffing numbers would put a strain on resourcing. By being able to securely log on and view this data remotely, management quickly found a fault in the system that greatly reduced water security. A field engineer was sent on site with a replacement part and the communities' water security time was greatly increased.

Implementing the solution has allowed not only the company to centralise and streamline its data collection and reporting, but also allowed it full transparency on the sites it manages. All permissioned staff have live and historical telemetry visibility through a web browser in the field or back at base, using a range of devices from computers, tablets and mobile phones with no need for per seat licences or proprietary software/hardware.

Due to the simplified structure of the solution, all infrastructure between the AgentG2 through to the data storage and reporting can be hosted centrally. Changes to programming and alerting can be done remotely and reports and alerts sent automatically to management via email or SMS.

Since the implementation, PWC has increased the number of agents in the field, reducing the need to visit on site outside of scheduled maintenance visits. Staff are able to view all connected assets at a glance, freeing up funding and resources, and are better equipped and informed.

The company is now able to focus on providing not just infrastructure services to remote Indigenous communities, but ongoing sustainability and water conservation education in the Northern Territory.

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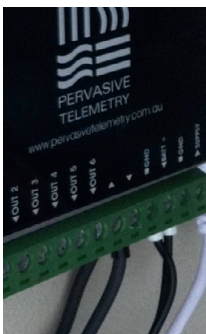
Pervasive Telemetry

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