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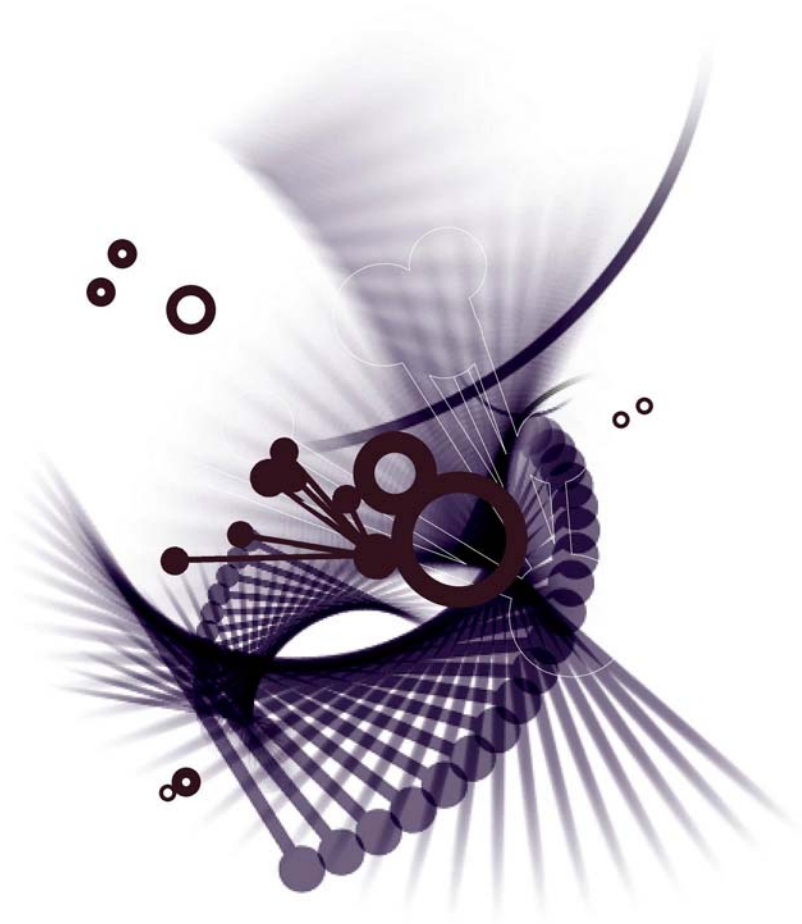
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TORRES STRAIT WATER

REMOTE
MAINTENANCE
ON ELECTRICAL PLANT & CONTROL





Application:

- (Water Treatment, Production and Storage

Technology Applied:

- (Specialised RTU Hardware
- (Leading HMI Software
- (Extensive PSTN, Private Line and Radio Communications Network
- (ISDN / WAN HMI Access

Engineered Solution:

- (Isolated Hostile Environment Implementation
- (Extension Session Based Communications Requiring Event Logged System.
- (Local Water Production Control & Remote Reporting

Engineered Solution:

- (Several Contracts including;
- (Civil/electrical/SCADA – not conducive to SCADA projects
- (Remote Maintenance Support (over 2000KM from Brisbane)
- (Electrical Integration, Instrumentation and Process Control Support
- (24hr Service Level Agreement

The Location

Thursday Island is one of the islands of the Torres Strait, the body of water that lies between the Cape York Peninsula of Australia and Papua New Guinea. In 1999 the Island Coordinating Committee initiated an upgrade of the water system on many of the islands within the Torres Strait group. This program included extensive Civil & Electrical works with a SCADA system to monitor and provide some control for the production, treatment and storage of fresh water.

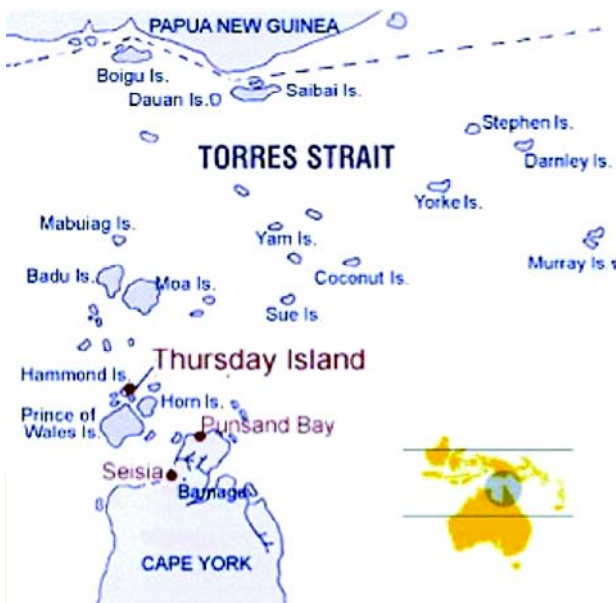


Figure 1 – Location of Islands

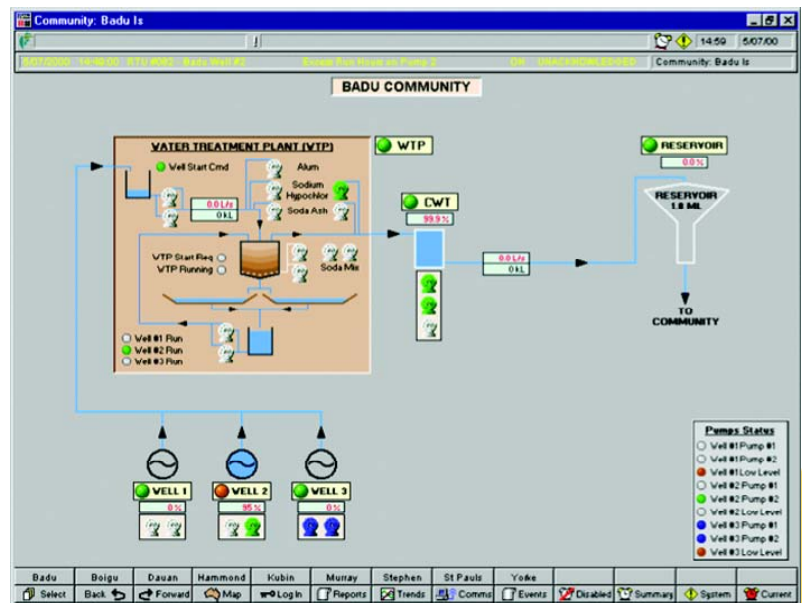


Figure 2 – Badu Island Water Supply Mimic

Background

Torres Strait Islands Water System is monitored and controlled from Thursday Island. The Communications Infrastructure to each Island is from the Master RTU to the sub-Master RTU via PSTN (PSTN is radio based). The "on-Island" Communications is a combination of Private Line V.23 (laid during Pipeline construction), location PSTN (public copper network) and conventional radio systems (private). Outstation data, which is a combination of real-time and event logged data, is reported by exception or periodically polled. Event logged data is time and date stamped at the source RTU. Due to the remoteness of this area and the harsh environment, this project required careful deployment planning or the costs would eventually be too high. Lightning prone areas required special attention to electronics, instrumentation and communications. Electrical repairers fly in due to the lack of expertise available locally. Each special condition required thought to how a project should be managed.

Our Approach

Provide;

- Standard procedures under a Service level Agreement including off-site control of application and design data.
- Training of water officers and maintenance personnel on how to configure and use the HMI to operate the plant.
- Remote Diagnostic support including analysis of plant and process to determine faults.
- Effective Support by intimately understanding the technology design criteria, electrical interfacing and communications.
- Parasyn could not apply a "try this & see" approach - absolute confidence in design and deployment of solutions was required off-site, before any changes could be applied to the system.
- The provision of Internet Client technology allows Management in Cairns to view the system via a corporate WAN.
- A recent re-build of the HMI Server Computer after fire damage was possible due to the complete off-site back-up maintained by Parasyn. Parasyn re-built and tested the system on a new computer in Brisbane and shipped it back to site for immediate restoration of service.
- Parasyn provides the Torres Strait Island Water Officers with remote support 24/7.



Parasyn - Process Information & Intelligence

Quality Design is required to implement complex communications and control systems. To understand further how the above system design could be used to control and monitor your plant, including the application of interactive voice response systems, historian databases and web access tools, call Parasyn Controls.