



FROM LITTLE THINGS BIG THINGS GROW

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PARASYN Develops SCADA System into MES Solution for Australian Pipeline Trust (APT).

PARASYN has successfully collaborated with Australian Pipeline Trust (APT) Asset Management Holdings to develop a Manufacturing Execution System (MES) to manage their extensive gas transmission and delivery network.

APT acquired Origin Energy's gas infrastructure assets in April 2007, forming a new administrative operation APT AM (Asset Management) Holdings. The new merged organisation manages major natural gas transmission pipelines as well as associated pressure regulating systems and delivery networks throughout metropolitan and rural Australia. In Queensland its massive network stretches from Roma in the west across to Ipswich and Brisbane, and up the coast through Hervey Bay, Bundaburg and Gladstone all the way to Rockhampton, linking to various energy providers throughout its length.

Following the merger, APT AM Holdings explored ways of improving management of their combined assets and an important element of this was expanding existing SCADA monitoring and control systems to form a more comprehensive integrated MES system capable of managing the whole gas transmission and delivery network across Queensland. PARASYN, who had previously collaborated with Origin Energy on production-well telemetry for the Spring Gully Coal Seam Gas field, assisted with system analysis for the expansion project and subsequently won the contract to develop the existing system into a full blown MES solution.

The main focus of the project was to capture customer consumption data for billing and management analysis, and this required extensive development work to extract, process and store the necessary data from flow meters distributed throughout the pipeline network. PARASYN specially developed a driver to interface with the Montec 'Monita' remote asset monitoring unit, a compact lightweight device commonly used for remote meter reading (See the PARASYN's June Newsletter for further details). This was combined with another PARASYN developed product ActiveX Operator Log and Alarms (AXOLA), a versatile add-on to a standard Human Machine Interface (HMI) such as Citect SCADA or Wonderware InTouch. AXOLA can log a diverse range of valuable information but is a particularly useful tool for logging alarm and event information. Within the APT AM MES solution AXOLA is used to flag missing or abnormal meter readings in which case the system automatically produces an estimated bill and requests the user to submit a manual reading.

The MES system uses an InSQL data historian for storage while the Application Engine required to provide the data mining, validation and report preparation was specifically developed by PARASYN engineers using the Wonderware Orchestra architecture. In addition many of what have become standard PARASYN solution features were applied to the system to ensure ease of operability. These have been developed by PARASYN in collaboration with major clients over a number of years and include split-screen design, easy to use graphical navigation, the ability to drill down to access specific operational information and clear screen based alarms linked to SCADAalarm for enunciated warnings and 24 hour monitoring. Operators are able to interface with the MES system using a flexible web based interface and this can be used to generate standard and ad-hoc management reports for APT AM and its clients.

Like all PARASYN solutions ARP AM's MES system was developed in close collaboration with the customer and as a direct result the solution is both tailored to meet specific operational requirements and to accommodate long-term development plans. For example, the billing system has been designed to interface with The Victorian Energy Network Corporation's (Vencorp) billing system, while the overall MES solution has been designed with spare capacity to allow for future growth, with easy deployment to additional sites using the base type concept.

Speaking in early September Tony Poole, PARASYN's Managing Director, was delighted with the successful outcomes from the APT AM project. Underlining its significance he said, 'We are seeing a growing number of our SCADA solution customers wanting more from their systems, and increasingly we're being asked to develop solutions that extract management and planning information rather than purely operational data. The MES solution we've developed with APT AM Holdings is a perfect example of this, and provides a development and delivery model we can apply with other key partners'.