

WA COMPANY PUTS SUBSEA CONTROL ON THE FASTWAVE

IMAGINE sitting in your office in Perth and being able to monitor and control a pump located 3000 metres under the water, more than 1000 km away off the north west coast of Australia.

Imagine doing without the cost of purchasing, installing and maintaining hundreds of metres of umbilicals to monitor and control your subsea operations.

Perth-based satellite telemetry system specialist Fastwave Communications has imagined it, come up with an answer and is about to test its concept off the coast of Western Australia.

Bringing together the advanced, low cost acoustic modem technology of fellow Perth company DSPComm and the internationally recognised satellite and Short Burst Data telemetry system of Iridium with its own integrated remote control and monitoring solutions, Fastwave has developed a global solution for transmitting near real-time, 2-way data from wireless subsea sensors and control systems.

Fastwave director, Nick Daws, told *Oil & Gas Australia* that the company had been working on the concept for a number of years after assessing that the continuing push by oil and gas companies into deeper waters required a more cost effective and reliable communications system.

"With the cost of purchasing equipment like umbilicals and the large expense of installing that subsea equipment, we believed the evolution in wireless communications really provided a great opportunity," Mr Daws said.

He said the Fastwave system provided a step-change from current wireless underwater networks.

"While wireless underwater networks are evolving rapidly to meet new demands, their capability to provide end-to-end data delivery to end users has been limited by a lack of integration with conventional communication systems.

"Delivering data from underwater wireless systems from the surface to the end user in a timely and cost efficient manner has been difficult, due to a lack of a suitable communication channel to relay the data, specially from remote locations.

"The Iridium Short Burst Data telemetry system, with its ability to relay data from any location on the planet, including small floating platforms such as buoys, provides the missing link for integrating onshore, vessel or platform-based monitoring and control systems with underwater wireless networks," he said.

Fastwave's integration with the Iridium system will make data available to end users anywhere in the world within seconds, eliminating or

reducing the need to send out vessels to retrieve data. Fastwave integrates its own microprocessor, data logger and embedded software with the Iridium equipment so that underwater data can be logged at the remote end if required and alarms sent to multiple users or locations if thresholds are exceeded.

The 2-way capability enables commands to be sent back to the remote installation, or to download logged data on demand.

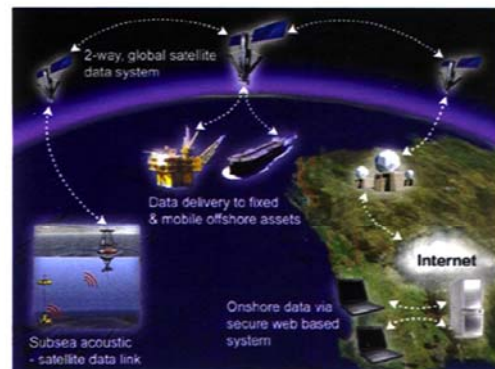
The final piece in the puzzle is the advanced, low cost acoustic modem developed by DSP Comm.

"The Aquacomm modems are designed for operation in extremely harsh conditions and are in use for defence, research and commercial applications globally," he said.

The system, which uses the latest digital signal processing and broadband communications technology, is capable of through water data transmission of up to three kilometres.

The Fastwave system is small and easy to install. The transmitting equipment would easily fit in a brief case, while the data has the capability of being accessed and responded to by mobile phone.

Mr Daws said the total package has the potential to carry out a range of near real-time activities including subsea process control, environmental monitoring, oceanographic data gathering and seismic monitoring.



The company has now refined its concept and is preparing to showcase the technology to leading players in the local oil and gas sector and Mr Daws said Fastwave is confident they will be impressed by what they see.

"We hope that the offshore oil and gas sector will recognise the huge benefits this technology can bring to the subsea industry," he said.

One leading subsea contractor is investigating the potential of utilising the Fastwave technology as a redundant system in its own equipment and Mr Daws said that may be the way that the system will gain its initial entry into the oil and gas industry. ■