MARINE TECHNOLOGY
REPORTER

Unmanned Vehicles

MUA
HERE TO STAY

Arctic
Efficient Under Ice

AUVs
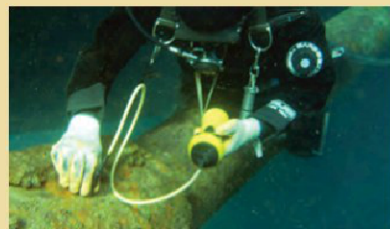## Autonomy Grows

ROVs
Evolving Missions

Floating Production Systems
Impact of $50 Oil

and high seas are causing delays. The operation was led by Indonesia's national search and rescue agency, Basarnas, who is getting assistance from teams in Singapore, Malaysia and Australia. Basarnas recently acquired several of JW Fishers ROVs and side scan sonars, along with diver-held video systems. It is also equipped with a scanning sonar, which is like radar for underwater use.

www.jwfishers.com

Underwater Metal Thickness Gauge

The Mark 2 Tritex Multigauge 3000 Underwater Thickness Gauge, from U.K.-based Tritex NDT Ltd., uses multiple echo to completely ignore coatings up to 20mm thick, only the metal thickness is measured. All measurements are error checked to ensure only accurate readings are displayed, even on uncoated metal. It has a large bright 10mm display which is designed to be easily read by the diver, even in poor visibility.

www.tritexndt.com

SeaView Multiplexer

Communications for Legacy ROV's and Space Constrained Submersibles

While ROV technology is constantly advancing, the data demands of payload sensors and cameras have increased by leaps and bounds. This has created a bandwidth gap between many legacy ROV's and their ability to feed the data they produce back via an umbilical fiber.

Enter SeaView Systems, a leading provider of ROV services, custom vehicles, and hardware, whose OmniData multiplexer stack is designed to breathe new life into legacy ROV platforms hampered by bandwidth constraints.

Many ROV's provide a data backbone that might support 2 or 3 standard definition cameras and some serial data. Managing the demands of multiple HD video streams or applications such as multi-beam sonar, often requires additional cards in vehicles where space is at a premium.

SeaView's multiplexer and data converter suite break through this bottleneck with pin compatible PC-104 form factor replacements for the slower cards designed into numerous existing ROV platforms.

The SeaView multiplexer provides a handy set of video, serial, and Ethernet ports (including RS485-232 conversion) and timing triggers, all on a single card. In the case of especially demanding applications, SeaView's multiplexer can be linked with their Gigabit Ethernet converter and dual channel HD-SDI boards to transmit all this data on one single mode fiber.

An early customer for the product was Tetra Tech, a leading underwater survey company. Their Marine Mapping Group have deployed the SeaView stack as part of their Towed Electromagnetic Array (TEMA), a tow sled that performs undersea surveys targeting activities including detection and mapping of unexploded ordnance, cable and pipeline route surveys and O&M monitoring.

The design restraints of Tetra Tech's TEMA required it to be small enough to be rapidly transported and deployed from

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Technical Specs

SVS-109 Video and Data Multiplexer:
- 3 channels Standard Definition Video
- 10/100 Ethernet (2 port onboard switch)
- 4 RS-485 channels
- 2 RS-232 channels
- 2 RS-485/RS-232 configurable channels
- 2 High speed triggers for sonar and USBL timing

SVS-209 GigaBit Ethernet to Fiber Converter:
- Auto sensing Gbit Ethernet converter able to support 1000mbps, 100mbps and 10mbps Ethernet data rates.

SVS-309 HD-SDI to Fiber Converter:
- 2 channel video data transmission. Able to support 1080p and lower video formats with zero compression. Available in a range of CWDM frequencies.

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a vessel of opportunity while still able to provide a very comprehensive suite of sensors, lights and cameras. The demand for very high bandwidth data transfer, to multiplex up live HD video, still DSLR images, as well as all the data from altimeters, temperature sensors, and electromagnetic systems – all up one single-mode fiber cable, presented Tetra Tech with a challenging engineering problem. SeaView's multiplexer was a perfect fit, according to Richard Funk, Senior Geophysicist for Tetra Tech and designer of the TEMA vehicle.

"The enhanced bandwidth these multiplexers offer provides the flexibility to manage a wide range of sensors," said Matthew Cook, President of SeaView Systems. "Now you'll have the bandwidth to future -proof your existing ROV platform."