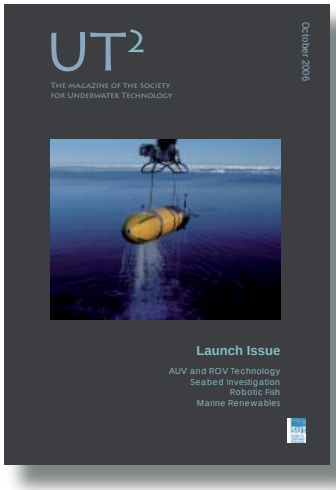
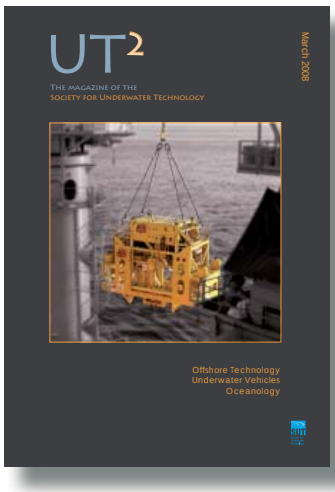
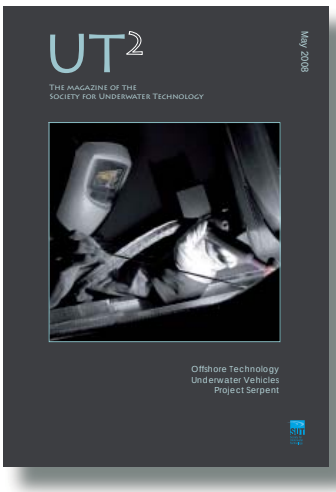
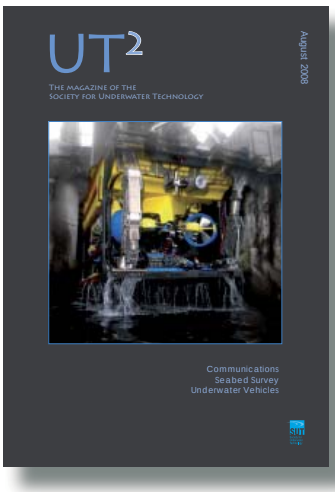








Display Media 2009

UT2

The magazine of the Society for Underwater Technology

Do you need to know what is going on but have no time to find out?

The printed word is generally accepted as the most convenient, versatile and authorarative medium in conveying information. But who has time to wade through all the journals that cascade onto your desk and sit unopened?

One reason may be that they are too diverse – a subsea engineer is rarely concerned with drilling or seismic processing. Sadly, many magazines are just too dense and uninviting to open in the first place.

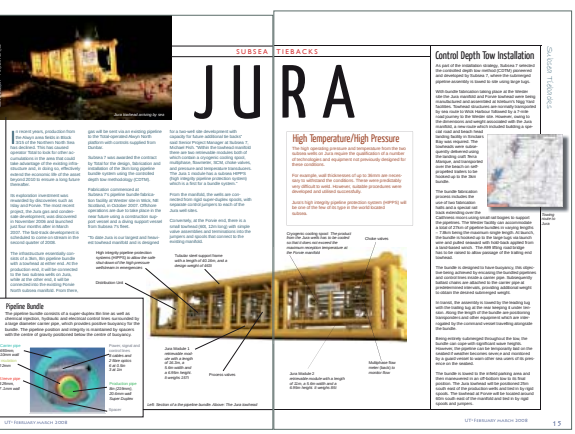
This is where UT2 comes in.

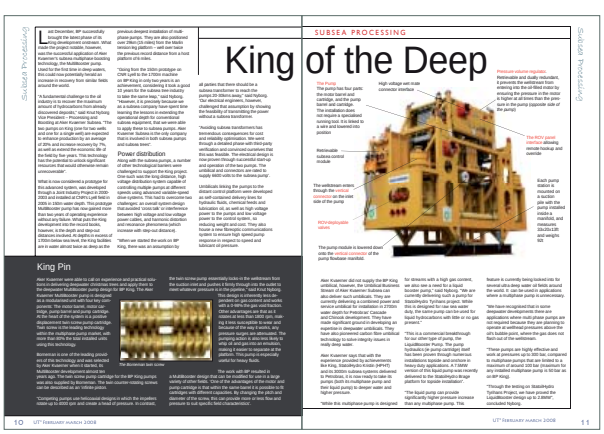
UT2 is an international quarterly subsea publication with a unique way of reaching its target audience which makes it stand out ahead of its peers. It distils subsea issues and presents them as punchy and accessible articles, well illustrated and easily digestible.

The magazine goes to members of the Society for Underwater Technology, the most influential and active Society of its type. It is also sent to qualified non-members, academic bodies and libraries around the world.

Importantly, it is represented at the major subsea and offshore exhibitions around the world at which the Society both co-organises and attends. It is also distributed at the many subsea training courses that are organised by the Society, embracing tomorrow's engineers and technologists. It is, furthermore, distributed at branch meetings in Aberdeen, Australia and Houston as well as local conferences at which the local branches attend.

UT2 is steered by industry experts and read by the people you want to be talking with. Why not consider UT2 in your advertising strategy?





Editorial Plan

Editorial deadlines are the first week of the month prior to publication

February

Seismic Aquisition
Underwater Intervention
Subsea Tiebacks
Maritime Security
Oceanography
Mariculture
Ocean Mining

Conferences: Subsea 08, Aberdeen
Underwater Intervention, New Orleans
Subsea Tieback, San Antonio
Subsea Technical Conference, Perth
Ocean Business 09 Southampton

May

Offshore
Subsea Processing
Survey
Control Systems

Conferences: Offshore Technology Conference, Houston

August

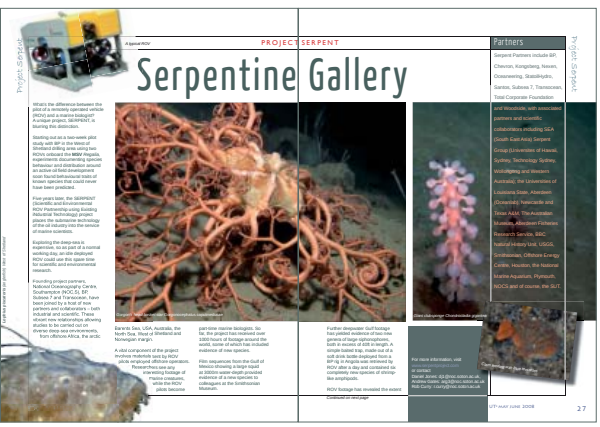
Seabed Processing
ROVs and AUVs
Mini-ROV systems
Sonar Imaging
Marine Salvage
Harsh Environment

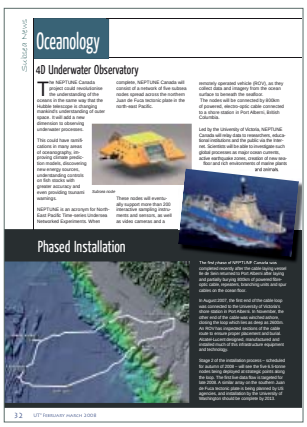
Offshore Europe, Aberdeen

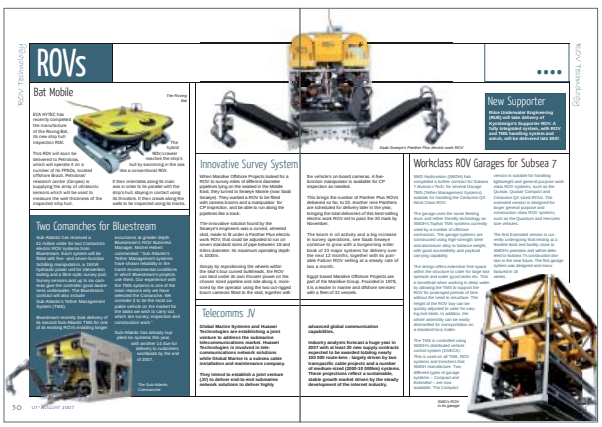
November

Deep Water
Pipelay and Trenching
Mooring
Flexible Risers, Flowlines and Umbilicals
Underwater Communication and Telemetry
Subsea Navigation and Positioning
Diving and Manned Submersibles
Underwater Cameras

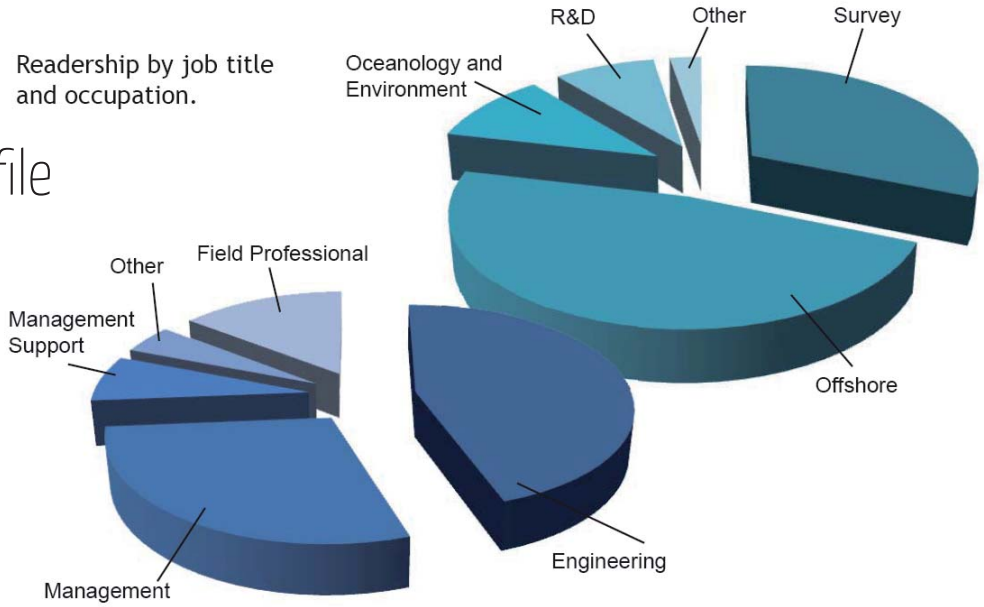
Conferences: Deep Offshore Technology 09, Monaco







Demographic Profile



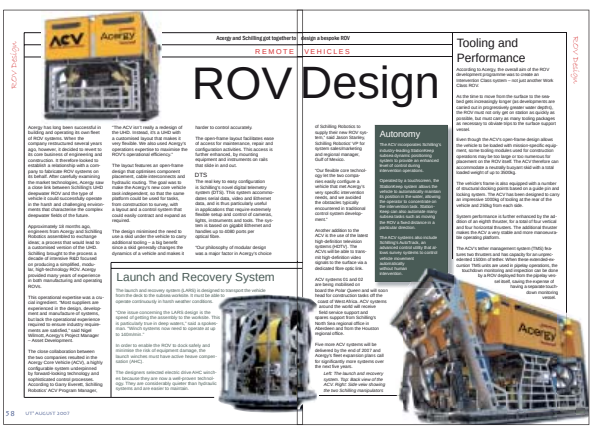
Aug 2008 print run: 4500

Advertising rates

UT² keeps its edge because not only is it precisely targeted but the advertising rates are extremely competitive. There is a further discount for more than one insertion.

If the advertisements are placed early enough, it will often be able to ensure their position in the publication — subject to availability — at no extra charge.

	1	2 (or more)	4
Full Page	£ 2140	£2000	£1940
Half Page	£ 1400	£1300	£1200
Quarter Page	£ 1000	£ 980	£ 850
	Back cover £2400	Inside back £2100	Inside front £2100


ROV design

Acergy and Schilling get together to design a bespoke ROV

REMOTE VEHICLES

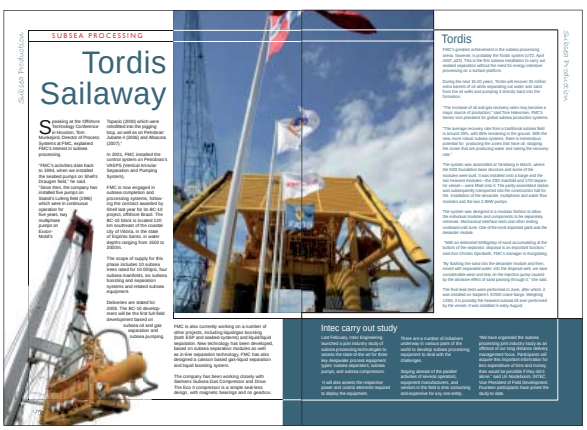
ROV Design

Tooling and Performance

Launch and Recovery System

Autonomy

DTS


Subsea Production

SUBSEA PROCESSING

Tordis Sailaway

Tordis

Intec carry out study

Underwater vehicles

UNDERWATER

Vehicles

Subsea Pipeline Inspection

Four for Bourbon

Submitting Materials

UT^2 is composed in InDesign.
Advertisement layouts should be sent in TIFF, EPS or PDF formats (including images and fonts if necessary)
Text in Word format
Digital illustrations should be in JPG, EPS TIFF or Hi Res PDF (300 dpi). **It is not possible to use images embedded in Word documents.**

1) Data can be accepted by FTP
Address: server.ut-2.com
User name ut2
Password ut2

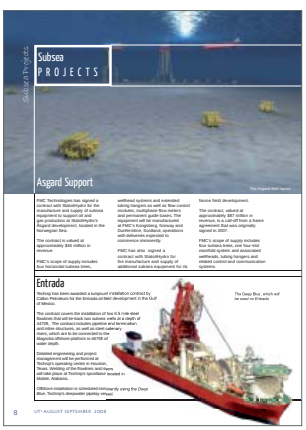
2) Files up to 5 Mb can be sent to ut2advertising@ntlworld.com

3) CD Rom

Mechanical Data Sizes (mm)

Full Page

Bleed	307 by 220
Trim	297 by 210
Half Page Upright	250 by 90
Half Page Horizontal	120 by 180
Quarter Page upright	120 by 95
Quarter Page strip	58 by 180



Corporate members of the SUT include 2H Offshore Engineering, Acergy, Advanced Well Technology, Aker Kvaerner Subsea, AMOG Consulting Andrew Palmer and Associates/Penspen Integrity, Apache North Sea Ltd, Azura Energy Systems, BAE Systems, BG Group, Boreas Consultants Ltd, BP Exploration, British Antarctic Survey, British Geological Survey, BSW Ballgrab, Castrol Offshore, CD Ltd, CEFAS, Chevron Texaco Australia, Chevron Upstream Europe, Circle Technical Services, Clough Oil & Gas Division, ConocoPhillips UK, Cameron, Cranfield University, CSIP, Divex,Dril-Quip (Europe), Dunlaw Engineering, E.ON, Ruhrgas UK North Sea, eProduction Solutions, ExAm Consultants, Expro North Sea, Floyd & Associates, FMC Technologies, Framo Engineering, Fugro GEOS, Fugro Limited, Fugro Survey, Fugro Survey Pty, Gardline Marine Sciences, Genesis Oil & Gas Consultants, GEO Century, GEO Subsea, Geological Survey Ireland, Geotek, H.O.S.E. International, Hayward Tyler, Hellermann Tyton, Hess, Innovatum International, Insensys, INTEC Engineering, INTEC Engineering Pty, ITF (The Industry Technology Facilitator), Ixsea, J P Kenny Inc, J P Kenny Ltd, J P Kenny Pty, JDR Cable Systems, Kellogg Brown & Root, Kongsberg Maritime, Lloyd's Register, EMEA, MacDermid Offshore Solutions, MCS, Metoc, Ministry of Defence (Navy), Mobil North Sea, National Hyperbaric Centre, National Oceanography Centre, Southampton (NERC), National Physical Laboratory, Nautronix, NCS Survey Ltd, Neptune Minerals, Noble Denton Consultants, NUI AS (Norwegian Underwater Intervention), Oceaneering International Services, Offshore Design Engineering, OTM Consulting, Pegasus International, Petrobras, Petro-Canada UK, Petroleum Development Consultants Pty, Poseidon International, Prospect Flow Solutions, Saipem UK, Santos, Schlumberger, Scottish Enterprise, SEA (Group), Seacore Ltd Seaeye Marine SeeByte, Shell UK, SLP Engineering, SMRU, Sonardyne International, SRD (Sonar Research & Development) Ltd subsea 7, Superintendent of Diving (Ministry of Defence), Technip Energy (UK), Technip Offshore,The Robert Gordon University, Tiree, TAP Offshore (Contracting), TSS (International), Universidade Federal do Rio de Janeiro, University College London, University of Southampton, University of Strathclyde, University of Wales, Bangor ,VerdErg Connectors, Vetco Gray UK, Woodside Energy, Zentech International.

Oceanology

Neptune

The junction box has been specifically designed to be modular with a highly flexible, open frame mechanical architecture that can be used on a variety of projects.

With an emphasis on high reliability and fault tolerance, the design is based around a single 'bare' vessel and uses a mixture of commercial off the shelf (COTS) and custom designed electronics to provide power and communications to science instruments. Following rigorous testing, deployment of the system is expected to have operational life in excess of ten years.

The ConnectWorks junction box design is a custom-configurable architecture for seafloor

'Each junction box can support up to 10 interfaces using a variety of littoral and deep-ocean communications, such as Ethernet. 'Each box supplies up to 1.6 kW of power to each instrument

in a variety of voltages to allow for the maximum flexibility to suit the unique requirements of the instrument that is attached to. The box can also switch supply up to 600 at 400V to each instrument,' they claimed. 'In the node and allows instruments to be added at any region of interest up to 10 km away from the trunk.'

The junction box is the primary science interface and can be configured pre-deployment and is immediately available once connected to the node. Data are passed from the instruments to the junction box where they are gathered by NEPTUNE instruments to power instantly anywhere in the world from the short station-internet connection located in Port

ConnectWorks International is the designer and manufacturer of the underwater instrument junction boxes for the NEPTUNE Canada ocean observatory project. This cable network features ten to six nodes to which seafloor laboratories can be configured by using the ConnectWorks supplied junction boxes to connect a variety of cabled science instruments to an observatory's up to 5000m of sea water.

Easytrak Multipliers

Three organisations have recently added additional Easytrak USBL tracking system from Applied Acoustics, to their existing fleets. The customers, from mid to large vessels, operate in a variety of applications, showing how versatile and valuable the product has proved to be.

Aberdeen based OSE Remotes has been awarded contracts by Amirel Teal. The Teal ROV unit will be used for survey and light work duties, it is understood.

Alan Cameron, Amirel Technical based Gardline Briar commented similarly ordered its second and third systems which were delivered in mid-December.

The third customer ordering again is Dundee based Subsea Vision which has chosen it to specifically survey and mark wreck and obstruction positions. The navy will take delivery of their third unit during the first quarter of 2009.

'We're particularly pleased that Applied Acoustics has been the first manufacturer to continues to expand,' said Gavin Willoughby of Applied Acoustics. 'It is a timely example of the way that, when skilled individuals and organisations, which share a commitment to quality, work together, resulting in a number of repeat orders'.

Darwin Navy client

Oceanworks on VENUS

The Victoria Experimental Network Under the Sea (VENUS) project designed and manufactured by Oceanworks Interna-

tional, has been successfully installed in Saanich Inlet in February 2008 and collected data has been flowing ever since. The head of Georgia Ing features 45km of cable and two central nodes, to which dozens of scientific instruments can be attached. The VENUS project is one of the most forbidding places to deploy an ocean observatory', said Dr Kim Juniper, Venus project leader, Victoria. 'Oceanlinks is thrilled to be involved in the leading edge of ocean observatory systems', says Oceanlinks project manager Alberto Moreno.

Underwater Vehicles

Record Breaker

What is the world's largest ROV? Well, it could be Saipem's new 3,000m ROV, the Ultra Trencher. Recently it was loaded out from SMB's Tyneside facilities and onto the deck of Saipem's vessel the new-build vessel Solitaire.

The world's most powerful jetting trencher in its capable of trenching rigid and flexible pipes, umbilicals and power cables. It has more than 2MW of total power from 500kW and four 375kW power electric motors. Each motor drives a 150kW jetting pump to the cutting nozzles. With oscillating jets to undercut large-diameter pipes, the trencher can handle pipes and commodities 6m of up to 1m diameter. Trench depths of up to 3.0m in water depths of up to 3,000m.

The system is neutrally buoyant in water and is fitted with a number of skirted spheres. The jetting spread can work in high sea-states as very fast, constant tension recovery winches deploy and recover the ROV using wires via a removable detachable sumo.

Designing is carried out by four 375kW water pumps through diverting the flow from the 500kW pumps mounted on each of the rear of the vehicle. The system incorporates a comprehensive array of tunnel servo-equipment including a pantograph

UTS ROV

thrusters, four 750mm vertical thrusters and two 1,000mm lateral thrusters. The jetting system is a twin legged jet tool mounted on double scissors linkage arms. Power for the jetting system comes from 375kW water pumps which can supply up to 4800m³/hr.

High pressure cutting jets are used for travel and slay. The oscillating jets attack the whole soil face in front of and beneath the pipe. It also is possible to fine-tune the cutting pattern to suit the different portions of the pit array. Several or multiple passes can be made along the pipe as necessary.

For backfilling, jets mounted at the bottom of the vehicle can be used to fluidise and re-create soil collapse onto the pipe as part of a separate pass. The multi-pass ability of the trencher means that the target design mounted on a 180 degree rotating system. This gives a 0.5m design depth and a remotely controlled trench width of 0.5 m. 2m.

Designing is carried out by four 375kW water pumps through diverting the flow from the 500kW pumps mounted on each of the rear of the vehicle. The system incorporates a comprehensive array of tunnel servo-equipment including a pantograph

AC-ROV

AC-ROV has sold an AC-ROV system to Canada's Shawcor Ltd.

The first inspection of Alberta, Canada.

Founded in 1999, Vik-Tech is one of Canada's premier remote visual inspection specialists, operating a fleet of land based crawler systems and an autonomous helicopter for altitude and aerial inspections. The new AC-ROV has the mobility and access capability of the AC-ROV system has bridged the gap between conventional tethered operated vehicle (ROV) operations and remote visual inspection applications.

Vik-tech has been monitoring the development of class ROV technology for several years and decided that it has shown that the AC-ROV, but the minimal size, portability and simplicity of operation required for remote visual inspection work typically the domain of pan cameras and the like.

This follows the sale of three units by Perth based Hydrovision. Commenting Paul Blackburn, Managing Director Bill Bullock, the units have been purchased by Hydrovision, Mahwah Canada of Campbell Diving Services, Port Douglas, Queensland Australia and the Fishing behind the AC-ROV purchase.

'At Camplin we position ourselves at your one stop for any underwater survey, inspection and repair. The portability, ease of deployment, control and high manoeuvrability the AC-ROV provides fits with our ethos,' said a spokesman.

Purchasing two AC-ROV systems in quick succession, Mr Dudley Thompson of Underwater Observations PX, was impressed with the offshore performance of the first unit.

'The capital value of the AC-ROV has been a key factor in our decision. The decision to purchase the second unit was a no brainer, giving us a greater work scope and fleet redundancy.'

The AC-ROV

Underwater Wideband

Wireless through water communications has traditionally been the preserve of the military and acoustic equipment manufacturers. To date, systems have been largely limited by the bandwidth available with only small packets of data being sent over long ranges. However, Sonardyne International has introduced Wideband signal technology which is matching what is possible.

Acoustic telemetry is a core technology of most Sonardyne's subsea systems. It provides the communications between transponders and seafloor-based, range-and-sensor information. SMS and 6000S protocols enhance this task and enable users to utilise the maximum bandwidth for data-transfer needs.

Sonardyne also provides safety critical systems that rely on robust communication for valve control, Blow Out Preventer (BOP) and well-bore control systems (WOCS). As users' confidence in acoustic telemetry increases, more systems are using the acoustic link as the 'back-up' to the hard-wire comms as the primary control method. This can provide large cost savings by reducing or removing the need for umbilicals and control lines or replacing umbilicals that may have been damaged. This is particularly common on high-pressure/high-temperature (HP/HT) wells, which can provide long range (up to 5km) communication links, thereby not requiring repeaters between the vessel and transponders on the seafloor.

Sonardyne's tsunami detection system is one such example. It uses HPR seafloor telemetry and SMS surface buoys to provide real-time surface monitoring every hour, which in turn relays the information back to land via a satellite link.

The robustness of the telemetry is

Top Left: A buoy-mounted surface unit receives data from subsea transponders and sends them via an Inmarsat-C satellite terminal to a shore

SMS and 6000S Protocols

A protocol can be defined as a set of standard rules for data representation. This includes the signalling, authentication and error detection required to send information over a communications channel.

Sonardyne has developed two main protocols to transform messaging (SMS) and a guaranteed data delivery service (6000S).

The SMS protocol is synonymous with mobile phone text messaging. The system enables the user to send a text message of up to 128 characters that can be sent to any SMS enabled device, anywhere in the world. It operates as a 'send-and-forget' link, however, the receiving unit can send a message back to confirm safe arrival and time. This enables the user to control whether data is re-sent and is ideal for simple command and control functions. For

real-time data transfers, the SMS protocol provides a minimum latency data-delivery service, which is ideal for time critical control tasks, but which is only valid for a short period – for example, tracking an AUV or sending turn data.

The 6000S protocol will only deliver data to the user when it is complete and completely and without data errors. Should a data packet with errors be received, this protocol is able to find request the re-sending of the affected data packet. The 6000S protocol can also stitch the packets back together to optimise the communications bandwidth.

Due to the increased protocol overhead, the 6000S is not as efficient in multi-access operating environments, therefore this method is often used to retrieve logged data for post-processing analysis.

Schilling's UHD ROV

2 UHDs for Global

Schilling Robotics has supplied Global Marine Systems with two of its new UHD ROV systems during the first quarter of 2008.

The class-leading power and technology provided by Schilling's UHD vehicles will allow Global Industries to operate in the harshest subsea environments and to perform the most demanding construction and intervention tasks.

With approximately 5000 employees worldwide, Global Industries has a marine fleet of 26 vessels.

The ROVs (Schilling UHD production units 30 and 31) feature 200hp and are sized for operation to a depth of 4000m. Both systems are also fitted to outstanding work-class ROV to deliver management system (TMS) and Schilling's new Orion manipulator technology with gripper/ thruster, high-definition video capability and advanced arm functions.

OSMA's launch-and-recovery systems, featuring active heave compensation, are integrated with the systems as standard, and are supplied with a vessel Olympic Challenger.

The initial systems will be tasked to perform a wide variety of subsea operations in construction, IRM, SURF and deepwater pipeline developments and deepwater support.

San Diego Harbour Police Complete SeaBotix LBV Training

extremals of objects much easier.

These features are critical as their objectives include evidence gathering, search-and-recovery, and ship hull inspections in harbour currents.

To further enhance their capabilities, the San Diego Police selected options including a multi-function grabber arm, sonar, manipulator, tether management system (TMS) and extended LED lighting. SeaBotix is currently the only micro-ROV that provides full bandwidth multiplexer tether data and video telemetry, which is a capable, rather than only part of the vessel's capability via copper wire. The LBV is also the only tether using the LBV will be the highest quality possible within the mini- and micro- ROV classes.

The SeaBotix LBV is the class leading micro-ROV that is fully field-configured with auto-heading, auto-depth and auto-pitch, variable camera and light gain adjustment that make

The Vehicle LBV200SC

Underwater Vehicles

Jaguar on the prowl

At one time, smaller electric ROVs were normally used for observation and light intervention work, while heavier duty tasks were the domain of the larger hydraulic work-class ROVs. This changed with the introduction in 2004 of the launch of a new electric large work-class ROV. Called the Seaeye Jaguar it was designed to fill the gap between the range and the work capabilities of both types in the world.

According to Mark Dickson, its launch marks the introduction of an entirely new generation of electric underwater vehicles with technological innovations set to maintain the company's lead in the electric ROV market. Dickson said: 'The Jaguar is the first vehicle to be launched with a new 'all-digital' control system that makes it easy to pack. The Jaguar has a WOR-KING depth rating of 3000m and a launch weight of 1500kg.

Yet under half the weight of its hydraulic ROV equivalent, with a smaller footprint and needing fewer operators, the Seaeye Jaguar can bring significant savings in operating costs. With a power-to-weight ratio that is by far the best in its class, the Jaguar will bring the precise control associated with Seaeye's ROV technology to an ever wider range of

Pilot Interface

Mark Dickson explains its new 'pilot friendly' interface: 'Operators will be able to configure the vehicle to their own preferences, removed and operated on a mini flying

When mounted with in the console desk, or if preferred, removed and operated on a mini flying

There will also first built diagnostics viewer and 'black box' recorder. A unique system of self-diagnostics and simple animations will help to identify any fault and the necessary remedial actions to the pilot. It uses pictorial representations rather than different language options.

Thrusters

Speed of ascent and descent is also faster. This follows new developments in thruster technology that has doubled the thrust power of previous systems. There are four horizontal SMB and four vertical SMT 5000 brushless DC thrusters which provide full 3D control including pitch and roll.

'Apart from having a greater power density, the integrated electronic speed controllers have been designed to offer rapid thrust control with maximum acceleration and braking'