



Underwater Solutions

MKS Newsletter Issue 5 OI2006



MARINE SURVEY EQUIPMENT SPECIALISTS

MK Services provides :

- Acoustics
- Geophysical Systems
- Flotation
- Subsea Tracking
- Emergency Location Equipment
- Hydrophones
- CTD's
- Oceanographic Systems
- Mooring Systems
- AUV's
- ROV's
- Cameras
- Consumables
- Software Packages

MKS at OI 2006 - Stand 928



Whilst we all struggle to believe it is two years since the last time we were all at the ExCel centre for Oceanology, the truth is, it is time once again for a gathering of the oceans community.

The uniqueness of Oceanology is in part due to it's ability to attract visitors from both academia and the commercial world. It is this diversity that makes the week so interesting and enjoyable.

Running from the 21st to 23rd March, we look forward to seeing you all at OI 2006.

Best Regards
Malcolm Kirby
Managing Director

Companies Represented By MK Services

STAND 928

TELEDYNE BENTHOS
A Teledyne Technologies Company

OCEAN IMAGING SYSTEMS

WOODS HOLE GROUP

CSEI
Colmek Systems Engineering
Salt Lake City, Utah

Navigation Systems, Inc.

MK Services Ltd

24 Eden Way
Pages Industrial Park
Leighton Buzzard
Beds, LU7 4TZ
UK

Phone: +44 (0) 1525 382333
Fax: +44 (0) 1525 850073
Email: sales@mksservices.co.uk
Web: www.mksservices.co.uk



STAND 103



STAND 936



STAND 1128

Benthos becomes Teledyne Benthos

At a Special Meeting held on 27th January, the shareholders of Benthos voted to approve the merger of Benthos with a wholly-owned subsidiary of Teledyne Technologies Incorporated.



Following the merger, Benthos has started operating under the name Teledyne Benthos.

It is anticipated that the natural synergy's between Benthos' and the other Teledyne group companies product ranges, will provide excellent opportunities for an enhanced range of integrated systems to be offered to customers.

Teledyne Benthos Smart Release

The SMART Release (Smart Modem and Acoustic Release Technology) is a unique concept from Teledyne Benthos that combines the proven technology of an underwater acoustic release, with the reliable undersea communications functionality of an acoustic modem.

When deployed, the unit can be connected to an underwater sensor such as a Conductivity Temperature and Depth recorder (CTD), acoustic Doppler profiler, or other devices.

The SMART Release unit can then acoustically transfer data from the device to which it is connected up to the surface or to another sub sea unit and later be retrieved.

This new device will allow oceanographic, military and other users the ability to monitor and retrieve data from their sub sea instruments

and release the entire package of instruments successfully to the ocean's surface at a later date.

The SMART release is currently offered in two forms. The SR-100 pictured is based on the model 865-A Acoustic release, whilst the SR-



75 is similar to the TR-6000, a proven Benthos acoustic transponder. For the SR-75, the electronics, batteries and a transducer are housed in a 6,000m rated glass sphere with a burn wire release mechanism. The self-buoyant nature of this modem provides a very flexible alternative, particularly for the experimental user.

NXIC ADC takes Oceanographic Community by Storm

The NXIC ADC is the latest in the range of NXIC (Non-external field Inductive Conductivity) range of CTD sensors manufactured by FSI (Falmouth Scientific Inc.)

This ability, combined with a highly modular design, makes the NXIC ADC a very versatile sensor platform.

estuarine communities, with sales being made to research, military and commercial organisations world-wide.

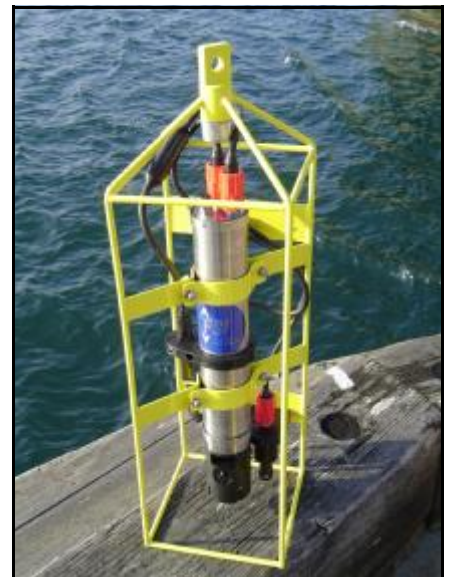


The specially developed NXIC electronics mean that the NXIC range will now draw a staggeringly low amount of power compared to its competitors. Combine this with the large 128MB to 256 MB of internal memory, and the result is a unit whose deployment life and data gathering capability is unmatched.

Other features include faster sample rates (from 1 to 15 Hz), 115K baud data download, no proximity effects and powerful, user friendly software for real-time acquisition, sensor calibration and post-processing of data.

The ADC variant is fitted with four additional Analogue to Digital Converters, and one RS-232 input, to allow the connection of additional sensors. These would typically include, but would not be limited to, Dissolved Oxygen, Turbidity, pH, Fluorescence, PAR, Altitude etc.

Available in 500m Delrin, and a 7,000m depth rated titanium body version, the NXIC ADC is rapidly gaining a fan base within the oceanographic, littoral and



NXIC ADC with additional sensors. One of two delivered to Gardline Environmental.

'Underwater GPS' made easy



The latest in the series of 'Underwater GPS' products offered by ACSA, the GIB-Lite offers an affordable solution to those users who need accurate subsea positioning in a confined area (typically 500m x 500m).

By firstly using a smaller, lighter buoy, and secondly by combining some of the deck box electronics into the antenna assembly, ACSA has produced a system that is even easier to install and deploy than the standard GIB system.



Already finding applications in ROV operations, marine archaeology, and diver tracking, it has become apparent that the type of application originally envisaged for the GIB-Lite system, has been quickly overtaken by the ingenuity of users to find new and exciting opportunities for its use.

Where the limited range of the GIB Lite is too much of a restriction, the standard GIB system continues to offer a viable alternative to more traditional approaches, such as USBL, particularly in inshore operations and on vessels of opportunity.

REMUS Goes Deeper

Having delivered over 70 of the original REMUS AUV's, now given the designation REMUS 100 (as it is depth rated to 100m), Hydroid has now launched two new vehicles, the REMUS 600 and the REMUS 6000.

The REMUS 600 is rated for operations to 600m water depth, and the REMUS 6000 is depth rated to 6,000m.

As with the REMUS 100, these vehicles are based on systems designed and built by Woods Hole Oceanographic Institute and exclusively licensed for manufacture by Hydroid.

REMUS 100



REMUS 600



By using the proven technology of the REMUS 100, as well as the experience of WHOI, Hydroid has been able to develop products to meet a wide variety of customer requirements.

With further derivatives of the REMUS 60 planned, the REMUS 1500 and REMUS 3000, a formidable range of products will soon be available for customers to choose from.

Dave Szabo joins Woods Hole Group

Woods Hole Group is pleased to announce that David Szabo has joined the company as head of Houston operations, effective February 7, 2006.

Mr. Szabo brings over 25 years of experience in metocean services, products, and numerical modeling. As a senior oceanographer, he will enhance the Woods Hole Group's presence in Houston, which is a major hub for energy and transportation related industries. As Woods Hole

Group's Houston Manager, Mr. Szabo will be responsible for directing business operations in the Gulf of Mexico region, serving industry worldwide.

"It is always a great boost when you can add an eminently qualified scientist to your team," said Dennis Aubrey, President of Woods Hole Group. "With David, we have a great scientist with global experience to help guide our vision in the Gulf region."

Mr. Szabo began his career as an oceanographer with Mobil Research and Development Corporation. Prior to joining Woods Hole Group, he held various positions including directing operations and initiating many innovative projects with Fugro GEOS, Inc. Mr. Szabo obtained his Masters of Science from Florida State University in 1978 in oceanography, and graduated from New York University in 1970 with a BS in meteorology and oceanography.

REMOTS Resurgence

Probably the best known of Ocean Imaging Systems's range of products, the REMOTS (Remote Ecological Monitoring Of The Seafloor) has undergone a resurgence of interest of late.

The ability to image the sediment /water interface has always been of interest, but is now finding new applications, and in turn the REMOTS is finding new aficionados.

By working in conjunction with one of the REMOTS's creators, Joe Germano, Bill McElroy of Ocean Imaging has ensured



that the lessons learned over many years of field operations, are quietly but efficiently, incorporated into the system design. This approach has seen a gradual evolution of the product, not least of which was the transition, a couple of years ago, from film based cameras to digital camera technology.

Joe remains a roving ambassador for the REMOTS system, and his infectious enthusiasm, coupled with Bill's engineering skill, has ensured that the REMOTS is as innovative today as when it was first introduced.

Colmek provides enhanced FPGA capability

Colmek is continually striving to improve the processing capability of the Q24 Mine Hunting Tow Fish – produced for Northrop Grumman in Annapolis, Maryland and deployed with the United States Navy.

One recent upgrade allowed Colmek to further streamline the airborne processing unit, and Colmek engineers turned to FPGA (Field-Programmable Gated Array) technology to accomplish the task.

Today more and more engineers are turning to FPGAs for assisting in consolidation of board-level logic into fewer components. The increased complexity of FPGAs has allowed system architects to replace a broad range of ASICs (Application-Specific Integrated Circuits) with FPGAs and further consolidate

and integrate the system logic into fewer and fewer components.

Colmek Lead Software Engineer Jason Martin states, "FPGAs provide you with unprecedented flexibility at attractive costs; therefore, accomplishing our project goals were well suited to the utilization of FPGA technology". Additionally, the advantage of reduced non-recurring engineering costs, easy design modification, and in-system re-programmability make FPGAs very attractive alternatives to ASIC technology. The end result is a vastly superior processing arrangement with a much smaller footprint.

Colmek is currently working on a variety of FPGA projects, for both military and commercial customers.

MK Services are specialists in the provision of marine survey equipment to meet the precise needs of geophysical, hydrographic surveying, underwater positioning and subsea inspection applications.

Representing some of the worlds leading manufacturers, MK Services is uniquely placed to provide a wide range of proven systems and services.



For more details on any of the items listed in this newsletter, or for any general enquiries, please contact Nick Lawrence or Malcolm Kirby and we will be happy to provide you with all the information you require.

24 Eden Way
Pages Industrial Park
Leighton Buzzard
Beds, LU7 4TZ
UK

Phone: +44 (0) 1525 382333
Fax: +44 (0) 1525 850073
Email: sales@mksservices.co.uk
Web: www.mksservices.co.uk