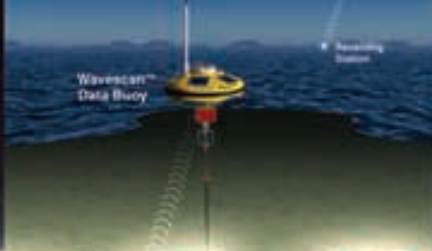
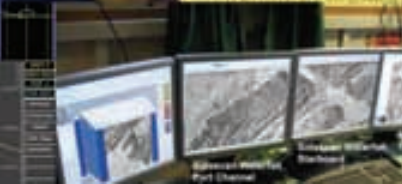
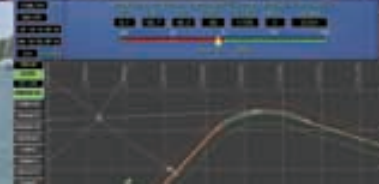
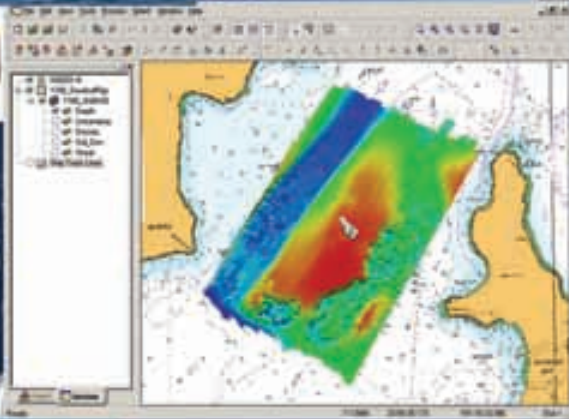


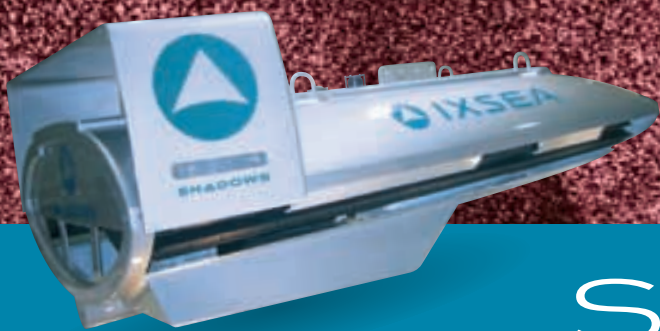
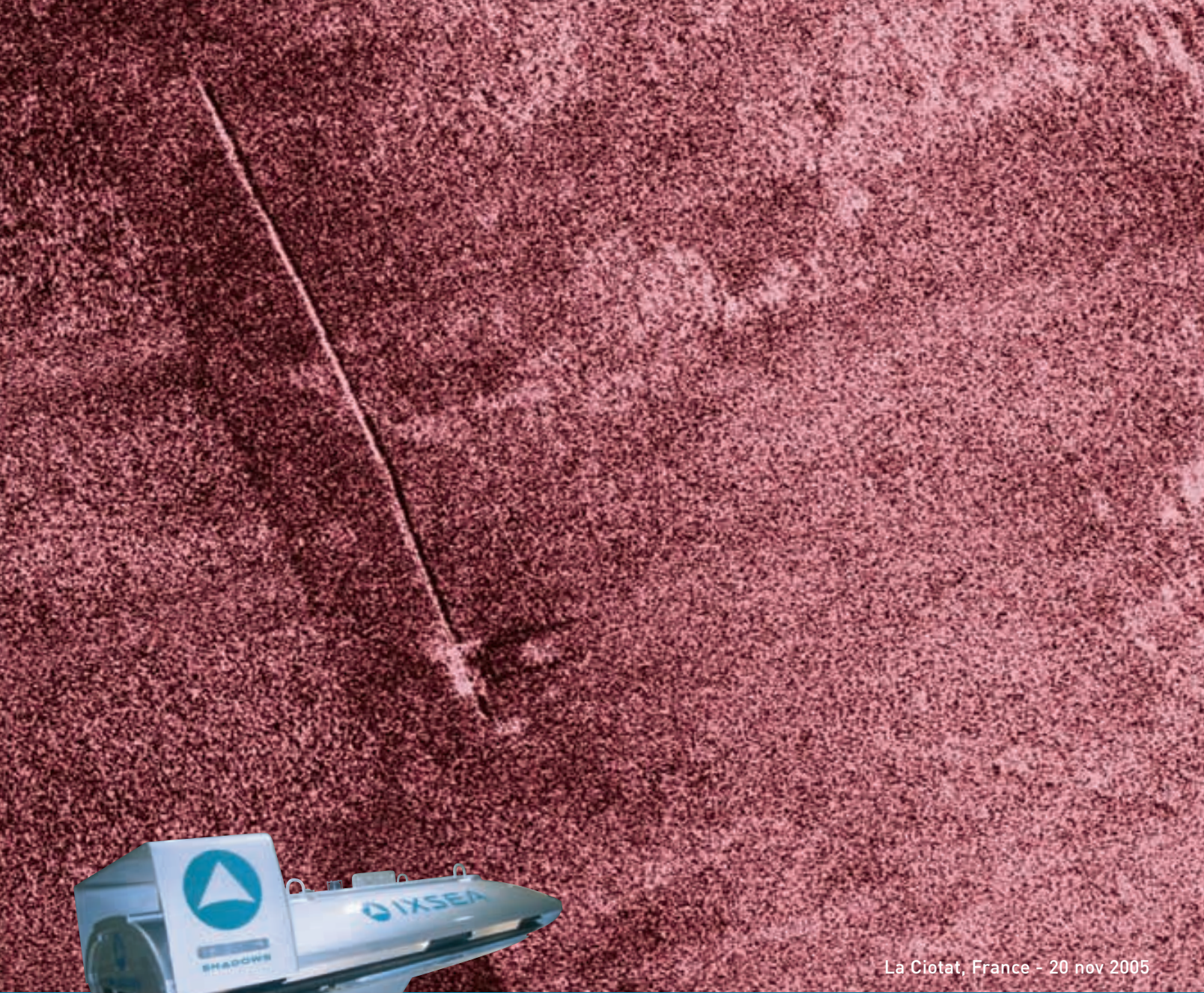
MARINE TECHNOLOGY REPORTER

June 2006
www.seadiscovery.com



MTR1000

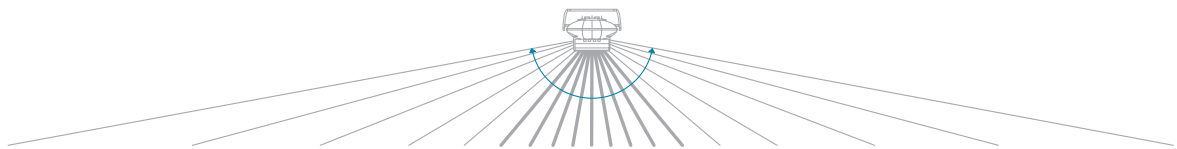




La Ciotat, France - 20 nov 2005

SHADOWS

Synthetic Aperture Sonar
Double Resolution & Halves Survey Costs !



SHADOWS now in the light

Visit www.maritimeequipment.com/mt & Click No. 207

Call us now • EMEA : +33 1 30 08 98 88 • AMERICAS : +1 (781) 937 8800 • ASIA : +65 6747 4912 • info@ixsea.com • www.ixsea.com

HAVE IT YOUR WAY RIGHT AWAY



USER CONFIGURABLE, FULLY MODULAR, 200-2000M DEPTH RATING, SIDE SCAN SONAR, CAMERA, STROBE, SWATH BATHYMETRY, ADCP, CTD, BACKSCATTER, SOUND VELOCITY, GPS, DVL-AIDED INS, LBL, USBL, COLLISION AVOIDANCE SONAR, IRIDIUM, WLAN, ACOMMS, CUSTOM PAYLOAD MODULES.

Visit us at stand 112 at UDT 2006 Hamburg

www.gavia.is

 **GAVIA AUV**

Visit www.maritimeequipment.com/mt & Click No. 205

HAFMYND · GAVIA Ltd, Fiskislod 73, 101 Reykjavik, Iceland, tel +(354) 5112990, fax +(354) 5112999 e-mail: info@gavia.is
GAVIA AUV Corp, 880 Calle Plano, Unit K, Camarillo, CA 93012, USA, tel (805) 4846639, fax (805) 4849012, e-mail: info@gavia-auv.com

MTROnline is updated every other week, and is distributed free to subscribers. Visit www.seadiscovery.com to subscribe to our e-newsletter, or visit the site to find these recent additions.

SUBSCRIBE

Subscribe to the print or electronic edition of *MTR* by visiting www.seadiscovery.com, or e-mail Kathleen Hickey at mtcirc@marinelink.com

POST & SEARCH JOBS

MTR JOBS listings are updated weekly and help match employers with qualified employees. Post a position or keep abreast of new employment opportunities at www.seadiscovery.com/mt/mtJob.aspx

ADVERTISE

MTR offers a number of print and electronic advertising packages. To see our editorial calendar and advertising rates, visit www.seadiscovery.com/mt/mtMagazine.aspx?mnl2=l2 advertising

SUBMIT EDITORIAL

MTR invites you to submit company news and events for publication on-line and in print. Visit www.seadiscovery.com/mt/mtStories.aspx?PostStory=new

DIRECTORY LISTINGS

MTR manages and publishes a number of industry directories online and in print. Search for a supplier or register your company for a free listing at www.seadiscovery.com/mt/mtDirectory.aspx

EVENTS CALENDAR

MTR maintains a list of upcoming industry events. Search an event or post information on your event at www.seadiscovery.com/mt/MTCalendar2.aspx

Researchers Document Underwater Eruption

A team of researchers said an unmanned probe got within feet of a violent underwater eruption in the Pacific Ocean, returning with footage of seismic activity under the sea. The footage, released by the Japan Agency for Marine-Earth Science and Technology, showed gray ash and volcanic rock spewing from the summit of the underwater NW Rota-1 volcano as it erupted in October. The Hyper Dolphin probe went as close as 7-10 feet from the eruption. (www.forbes.com)

MacArtney Chosen for Galathea Expedition

The MacArtney Group Ocean Science division was chosen as system supplier to the Danish Galathea 3 Expedition organized by "Dansk Ekspeditionsfond" (The Danish Expedition Foundation). MacArtney will deliver a system to be installed on board one of The Danish Navy's largest Naval Vessels "Vædderen". The system will be available for oceanographic and environmental related research. "



Enormous Wind Farm Planned for GOM

According to a report, a proposal to build the biggest offshore wind farm in the U.S. has won approval from Texas state officials. Texas General Land Office reportedly reached an agreement granting Superior Renewable Energy LLC the rights to 39,900 acres (16,150 hectares) of submerged lands in the Gulf of Mexico. There are expected to be more than 100 big wind turbines. (Source: The Washington Post)

1856: First Underwater Photograph

"In the Journal of the Society of Arts, W. Thompson, of Weymouth, England, gives an account of the means he adopted for taking a photograph of the bottom of the sea, in Weymouth Bay, at a depth of three fathoms. It appears that the camera was placed in a box, with plate-glass front, and a movable shutter to be drawn up when the camera was sunk to the bottom. When at the bottom, the plate was exposed for about 10 minutes. The box was then drawn into the boat, and the image developed in the usual manner. A view was thus taken of the rocks and weeds lying at the bottom of the bay. Mr. Thompson anticipates that it will be a ready and inexpensive means of arriving at a knowledge of the condition of piers, bridges, piles, structures, and rocks underwater. (Source: Scientific American, June 2006)

Correction: In the May 2006 article entitled "Bourbon Invests in Offshore Vessels to the tune of \$1.8 Billion", the name of Bourbon's CEO Jacques de Chateaufvieux was misspelled.

Marine Technology Reporter News Feed

Subscribe to Marine Technology Reporter's FREE News feed to get the latest undersea technology news delivered directly to your e-mail. www.seadiscovery.com



LBV150S²

**powerful, intuitive, capable
and affordable small ROV
solution.**

The SeaBotix LBV150S² is the benchmark that small ROVs are compared to. With its exceptional capability, stability and intuitiveness the LBV closes the gap between large ROV performance and small ROV portability.

Unique to the LBV is the incredibly small 7.6mm diameter umbilical and balanced vehicle weight/mass enabling unprecedented stability in a small ROV. Add that to the extensive list of standard features and you have the most capable, portable ROV on the market.

For more information on the LBV150S² and the 11 other LBV systems visit www.seabotix.com.



LBV
"A Small ROV Controlled by It's
Operator NOT It's Umbilical"



1425 Russ Blvd, T112D, San Diego, CA 92101 USA • Tel: +1 619 239 5959 • Fax: +1 877 349 7074 • info@seabotix.com

Visit www.maritimeequipment.com/mt & Click No. 214

This month's edition of *MTR* is a bit divergent from our normal path as we present the MTR100: information on 100 leading companies that serve the undersea technology market, whether on the scientific, commercial or defense front.

This project — the first in our magazine's history — was challenging, first and foremost because, unlike other such surveys, there was no common threads (financial results, for example) that could be used as a universal measuring stick. Many of the innovative companies serving this market, for example, are privately owned and unwilling to share financial details.

So it came down to some good old-fashioned reporting, which included observing, collecting information, consulting with trusted sources, and ultimately selecting a diverse group that we believed to be a fair representation. Surely there will be companies not listed that perhaps deserved so, but the number one criteria for inclusion was that each company had to complete and return an application form. Hundreds of companies heeded the call, and we laboriously whittled the field down to the selection, which begins on page 13.

As always, I look forward to your comments and suggestions. And for those of you interested, we've already started to distribute the survey packets for the 2007 edition.



Greg Trauthwein
Associate Publisher & Editor • trauthwein@marinelink.com

NOTE: As space was limited, those of you seeking additional details on the MTR100 can visit www.maritimeequipment.com/mt to receive free information.

Your Marine Technology
One-Stop-Shop



www.seadiscovery.com

Log on everyday and
receive:

- Daily News
- Exclusive Product & Technology Reports
- New Job Listings

Or, join thousands of
your colleagues and
sign up for our weekly
NEWS & JOB Updates
via E-mail.
It's Fast ... and FREE!

MARINE TECHNOLOGY REPORTER
www.seadiscovery.com

Vol. 49 No. 5
ISSN 1559-7415
USPS# 023-276

118 East 25th Street,
New York, NY 10010
tel: (212) 477-6700;
fax: (212) 254-6271

Marine Technology Reporter is published monthly except for February, August, and December by New Wave Media, 118 E. 25th St., New York, NY 10010-2915. Periodicals Postage at New York, NY and additional mailing offices.

POSTMASTER: Send address changes to MARINE TECHNOLOGY REPORTER, 118 E. 25th St., New York, NY 10010-2915. Postmaster send notification (Form 3579) regarding undeliverable magazines to Marine Technology Reporter, 118 East 25th Street, New York, NY 10010.

Publishers are not responsible for the safekeeping or return of editorial material. ©2006 New Wave Media.



Business Publications
Audit of Circulation, Inc.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means mechanical, photocopying, recording or otherwise without the prior written permission of the publishers.

Subscription: To subscribe please visit www.seadiscovery.com/subscribe

on the Cover

Images from the chosen MTR100 companies. (See story on page 13)



www.seadiscovery.com

NEW YORK

118 E. 25th St., New York, NY 10010
Tel: (212) 477-6700; Fax: (212) 254-6271

FLORIDA

215 NW 3rd St., Boynton Beach, FL 33435
Tel: (561) 732-1659; Fax: (561) 732-6984

PUBLISHER

John C. O'Malley • jomalley@marinelink.com

Associate Publisher & Editor

Gregory R. Trauthwein • trauthwein@marinelink.com

Editorial Director

Maggie Merrill • martrep@aol.com

Editorial Intern

Melissa Mendoza • mendoza@marinelink.com

Production Manager

John Guzman • guzman@marinelink.com

Asst. Production Manager

Irina Tabakina • tabakina@marinelink.com

Manager, Information Services

Tina Veselov • veselov@marinelink.com

Manager, Accounting Services

Eshier Rothenberger • rothenberger@marinelink.com

Manager, Public Relations

Mark O'Malley • momalley@marinelink.com

Manager, Information Technology Services

Vladimir Bibik • bibik@marinelink.com

CIRCULATION

Kathleen Hickey • mtrcirc@marinelink.com

ADVERTISING

Sales Manager

Dominick Daddio • daddio@marinelink.com

Senior Vice President, Sales

Brett W. Keil • bkeil@marinelink.com
Tel: (561) 732-1185; Fax: (561) 732-8414

Senior Vice President, Sales

Rob Howard • howard@marinelink.com
Tel: (561) 732-4368; Fax: (561) 732-6984

Vice President of Sales

Lucia M. Annunziata • annunziata@marinelink.com

Classified Ad Sales

Dale L. Barnett • barnett@marinelink.com

Managing Director, International Sales

Tony Stein • tony.stein@bineternet.com
12, Braehead, Bo'ness, West Lothian EH51 0BZ, Scotland, U.K.
Tel: +44 (0) 1506 822240; Fax: +44 (0) 1506 828085

Vice President, International Operations

Charles E. Keil • ckeil@marinelink.com
Tel: (561) 732-0312; Fax: (561) 732-8063

Editorial Index

Companies & People with editorial mention in this edition

Aandera Instruments	14	Larry Buchanan	58
AC-CESS Co.	14,59	Lindsay Gee	41
Allan L. Carswell	48	Lockheed Martin MS2	44
Anne Berg	11	MacArtney Group	2,36,44
Applied Science Associates	14	Mad Rock Marine Solutions	44
Autonomous Surface Vehicles	14	Magic Instinct Software	44
AXYS Technologies	15	Maine Maritime	8
BAE	16	MAR Inc. - Ohmsett Facility	44,45
Balmoral Offshore Engineering	15	Marine Academy of Science and Technology	7
Batelle	16	Marine Environmental Management	45
Bill Marra	52	Mariner Underwater Electronics	45
Birns	18	Martec-METOCEAN Data System	46
Bluefin Robotics	19	Martime Applied Physics Corp.	46
BMC Durfee HS	7	Martin Anderson	49
Bob Lobecker	6	Massachusetts Maritime Academy	6
Bourbon	2	Materials Systems Inc.	46
Brooke Ocean Technology	20	Measurement Technology NW	42,46
C&C Technologies	21	Milton Academy	7
Caledonian MacBrayne	59	NATO Undersea Research	12
Canyon Offshore	58	Nautronix	41,48
Caprock Communications	23	Neil Chaik	40
CARIS	23,59	Newfoundland & Labrador, Canada Ocean Technology Sector	31
Carrillo Underwater Systems	20,25	Noise Control Engineering	48
CDI Marine Systems Development Division	20,25	Optech	48
Chelsea Technologies	23,25	ORE Offshore	48
Chris Nicholson	29	Pacific Pipe & Pump	48
Chris Tarmay	18	Perry Slingsby Systems	49
Corpro Companies	25	Pipeline Communications	50
CruzPro Ltd.	26	Plymouth Marine Laboratory	50
Danish Expedition Foundation	2	Pro-Tect Plastic and Supply	50
Davidson Laboratory	27	Qinetiq	52
Deep Development Corp.	27	RBR Ltd.	45
Deep Ocean Engineering	24,29	RBR Ltd.	45,52
Deep Sea Systems Intl.	27	Reson	52
Deep Sea Power & Light	24,29	Robert Catalano	58
Donald I. Clarke	53,59	Robert P. Hamilton Jr.	58
Dr. Diane Di Massa	6,8	Rockland Scientific Intl.	53
East Lyme HS	7	Rogers HS	7
EdgeTech	29	Rotech Subsea USA	53
Edward Saade	28	Rutter Technologies	53,59
ESRI	34	SAIC	54
Falmouth Academy	7	Schilling Robotics	54
Falmouth Scientific	34	Schlumberger	59
Farsounder	34	Seabotix	47
Fran Rowe	51	Seaeeye Marine	18,54
France Telecom Mobile Satellite Communication	36	SeaTrepid LLC	54
Francois Haulet	12	Seimac Ltd.	54
Fugro Global Environmental & Ocean Sciences	36	Sidus Solutions	55
Fugro Pelagos	28,38	Sohre Turbomachinery	48,52
General Acoustics GmbH	26,38	SonTek/YSI Inc.	49,55
Geonav Marine Systems	38	Sound Ocean Systems	55
George Turner	57	Sound School	7
Gerry Germain	59	Sperry Marine	55
Glenn Willar	59	Statoil	59
Greater New Bedford Vocational Tech School	7	Subconn Inc.	50,55
Gregg Drilling & Testing Inc.	30,40	Superior Renewable Energy	2
Gregg in Situ Inc.	30	Susquehanna Valley HS	7
Guarino & Cox	40	Teledyne Benthos	16,55
Hafmynd-Gavia	35,40	Teledyne RD Instruments	51,55
Heila Marine Cranes	40	Telenor Satellite Services	55
High Tech High School	6,7	Tenix Lads Corp.	56
Hydra Dynamics	40	Texas General Land Office	2
Hydroid LLC	37	The Cornell Group	56
ICAN	40	Thierry Gaiffe	11, 39
Interocean Systems	41	Tolland HS	7
IVS 3D	41	Tritech International Ltd.	56
IXSEA	11,39,42,58	Triton Imaging	12,56
J.S. Milne & Assoc.	16	Turner Designs	57
Jack Vilas & Assoc.	42	Tyco Telecommunications	52,57,58
Jacques de Chateauevieux	2	Tyler Schilling	54
Japan Agency for Marine-Earth Science & Technology	2	Vetrotech Saint-Gobain Marine	57
Jeff Coutts	38	Waller Marine	57
Jim Case	6	Washington Chain & Supply	57
Journal of the Society of Arts	2	Woods Hole Group	58
Julian A. McDermott	42		
JW Fisher	43		
Kenneth R. Mackie	53		
Kent Deines	51		
Kings Point	8		
Kongsberg Mesotech	38,43		
L-3 Communication Klein Assoc.	43		

The Future on Display

MMA Hosts ROV Competition

By Maggie L. Merrill

On Saturday May 6, 13 eager high school ROV design teams made it to the Massachusetts Maritime Academy (MMA) to compete in the 2006 MATE New England Regional ROV design contest. There were at least 100 students, parents, mentors and volunteers at the event. MTR was there to provide poster judging and to help promote the event. MTR has covered this event since it started at Cambridge Rindge and Latin school. In subsequent years it was held at MIT, and at URI for two years. It looks like the event was so successful at MMA it will be held there again in 2007.

"This is the largest turn out we have had for the New England Regional competition. In 2005 ten teams competed and in 2004, there were seven teams. We hope to attract 20 teams next year," said Jim Case, this year's race director.

This event was co-organized by the Marine Technology Society's New England section and the Stellwagen Bank National Marine Sanctuary. Massachusetts Maritime

Academy was pleased to hold the event. "The fact that so many students who are talented in math and science were on campus was a great recruiting opportunity," said Diane Di Massa, Engineering Professor at MMA.

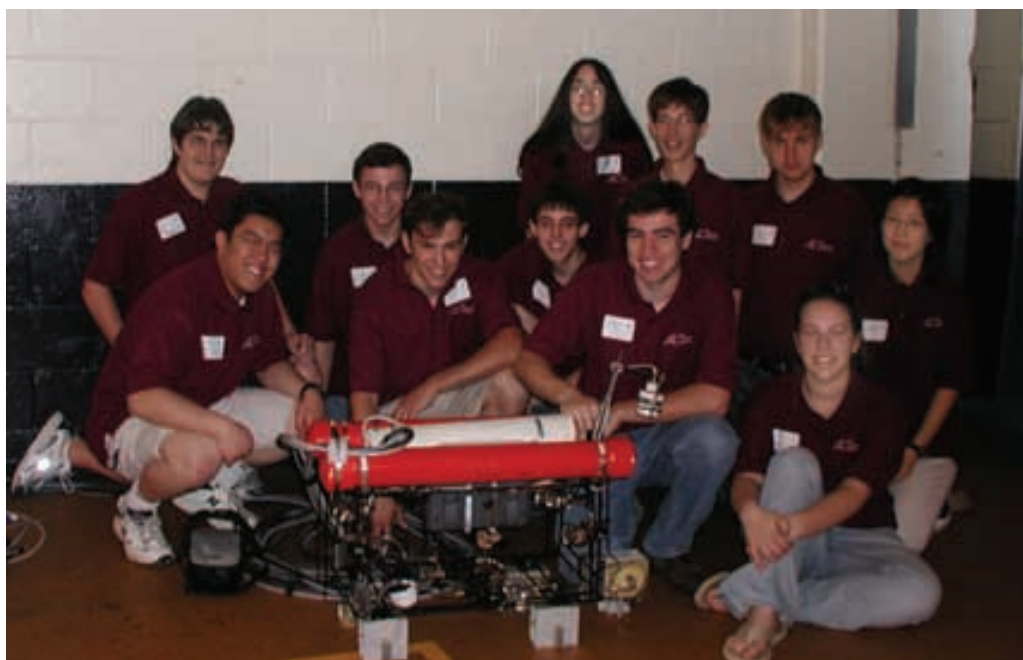
The purpose of the competition is to attract young people to the field of ocean science and technology. During these competitions teams connect with industry mentors, judges and university faculty who are in a position to educate the high school students about opportunities in the field of underwater vehicle design and operations. The competition fosters creativity and problem solving using basic engineering principles. "The most amazing thing about this competition from a judging point of view is to see how all the teams approach the design issues. There were 13 teams and they had 13 unique vehicles," said Bob Lobecker, head judge.

Case was grateful to his team of over 20 volunteers who were mostly MTS members and from the MMA.

High Tech High School, of Lincroft, NJ,

High Tech High School ROV Team assemble to pose prior to taking every first place in the NE Regional ROV Competition, May 6, 2006.

(Photo credit: Maggie Merrill)



placed first overall. High Tech achieved a clean sweep of all categories: Pool Mission, Engineering Evaluation, Written Report, and Poster scores. The team will move on to the Nationals that will be held at the NASA Johnson Space Center Neutral Buoyancy Laboratory in Houston, Texas, to defend its National Champion title. Milton Academy of Milton, Mass., placed second, and will go on to the Nationals as well. Third place went to The Sound School Team 2 of New Haven, Conn.

High Tech High had a team of 16 students ranging from freshmen to seniors. The school is one of several public Magnet Schools in New Jersey which admit students based on performance into specific career track programs, including, engineering, marine science and allied health care. There were two additional entries from a sister Magnet School, Marine Academy of Science and Technology (MAST), which is also located in New Jersey.

Last year High Tech came in second in the Regional competition and won the Nationals. This year the team improved the propellers and motors and it was able to conduct more testing prior to arrival. The team also changed the frame from alu-

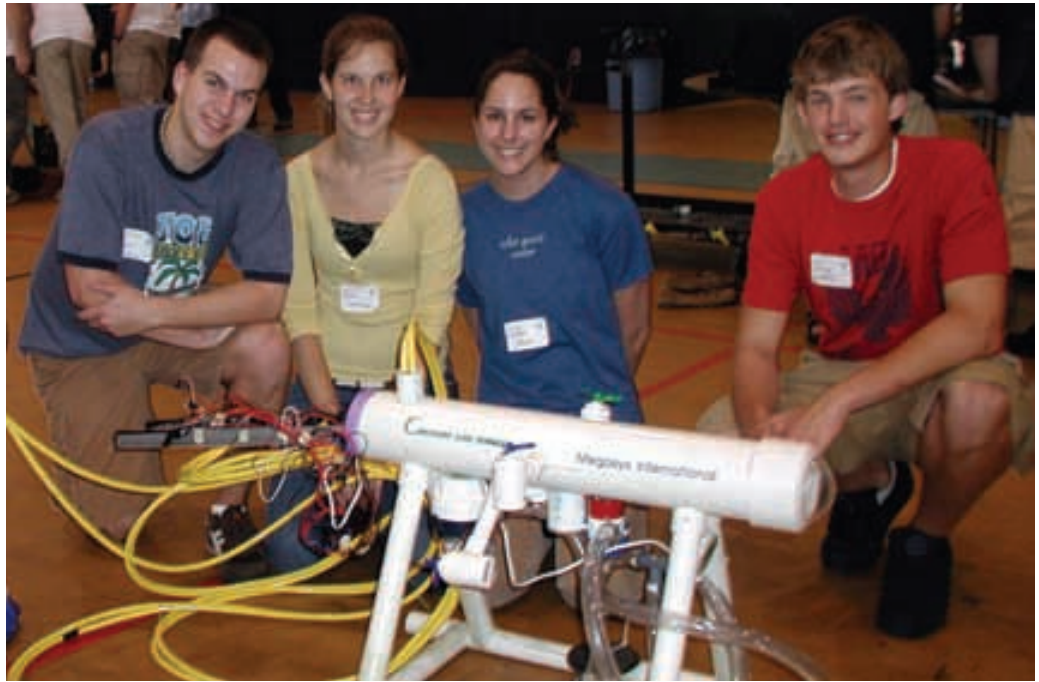
minum — which created too much drag — to 0.25-in. steel rod. Because the requirements of the event entailed picking up a one kg box from the pool bottom, it was necessary to add a ballast system, which in their case ended up being a buoyancy compensator modeled after those used by SCUBA divers. All the electronics were custom built to withstand complete water emersion.

The Sound School of New Haven, Conn., also entered two teams. Team 1 was a team of 11 seniors. This year The Sound School used sealed cameras instead of the ones that leaked last year. Also, due to a technicality in the rules, the team had to change its design significantly, losing nearly seven weeks of work and meaning that the vehicle was not ever tested in the water.

As it turned out, on race day the team was unable to get the system wet. The Sound School's Team 2, comprised of freshmen performed very well, placing third overall.

Tolland High School, also from Connecticut, entered this year for the first time. The team created a Technology Club for the sole purpose of building an underwater vehicle, and the faculty advisor suggested they contact MATE for additional

Team #	ENG EVAL JUDGE TEAM 1	POOL MISSION	POSTER	WRITTEN REPORT	TEAM NAME	TOTAL SCORE	AWARD
1	80	60	11	10	East Lyme CT HS	161	
2	80	80	9	35	Falmouth Academy	204	
3	73	10	17	33	Tolland CT HS	133	Sharkpedo
4	65	100	6	30	Rogers, HS Newport RI	201	
5	64	100	5	10	BMC Durfee HS, New Bedford MA	179	
6	56	0	5	29	Susquehanna Vally H. S.	90	Team Spirit
7	51	110	0	24	Greater New Bedford Vocational Tech School	185	Judges Award
8	75	115	14	39	Milton Academy	243	2nd Overall, On to Nationals
9	78	0	12	14	Marine Academy of Science and Technology 1-Team Allen, Sandy Hook NJ	104	
10	68	0	12	15	Marine Academy of Science and Technology 2--Team Omega, Sandy Hook NJ	95	Guts and Glory Award
11	89	130	19	42	High Tech High School, Lincroft, New Jersey	280	1st Overall, On to Nationals 1st Mission, 1st Engineering Evaluation, 1st Poster, 1st Report
12	67	0	6	20	Sound School New Haven CT 1-Sr Team	93	
13	75	75	18	38	Sound School New Haven, CT 2-Team Shadow	206	3rd Overall



Tolland High School seniors, (L-R): Scott Lettrick, Alden Strambourgh, Cainon Stark, Greg Lokitis, will recommend a team enter next year.
 (Photo credit: Maggie Merrill)

Massachusetts Maritime Academy

Dr. Diane DiMassa, professor of engineering at MMA, was interested in the caliber of the students participating in the competition. She spent quite a bit of time interacting with the teams. MMA was established as a merchant marine academy to train sailors to run merchant ships during peace time and to provide logistical support to the military when called to duty. Since the end of World War II there has been a marked decline in the demand for U.S. merchant marines, as the number of ships flying the U.S. flag has continued to dwindle while the majority of goods shipped into and out of the U.S. are aboard foreign flag vessels manned by foreign crews. While there will always be a need for U.S. trained sailors to run pilot vessels, U.S. Coast Guard vessels and ferries within U.S. waters, institutions such as MMS - as well as other merchant marine schools such as Maine Maritime in Castine, Maine and Kings Point Maritime Academy in NY — have been forced to expand their offering and focus to survive.

These schools have survived and continue to train cadets who are specializing in maritime trades for commercial as well as government positions.

MMA is not a trade school, yet it provides an extremely hands on approach to learning. More than 90 of the graduates are employed in their chosen field immediately following graduation.

"MMA is a hybrid within the Commonwealth's college system. Everyone who graduates from MMA receives a Bachelors of Science degree. Everyone must take three semesters of Calculus. It's a very rigorous program of study, said DiMassa, "sprinkled with lots of hands on work."

The school is divided into different departments such as: Deck, Diesel and Auxiliary; Thermo Fluids, Fluid Mechanics, Facilities Engineering and Physical Plant. Interestingly the students who follow the Facilities Engineering and Physical Plant curriculum are placed in jobs both onshore running large buildings and at sea running large vessels.

The freshmen are all sent to sea aboard the 540 ft. MMA seagoing merchant vessel, Enterprise, for the winter semester. As a matter of course all MMA students are required to take advanced CPR, firefighting and leadership training classes, which gives them a practical knowledge base when they graduate.

Students can choose several different majors for which they receive a Bachelors of Science: Emergency management, Facilities and Environmental Engineering, International Maritime Business, Marine Engineering, Marine Transportation, Marine Safety and Environmental Protection. Students can also become qualified to receive a merchant marine officer's license and a Naval officer's commission as well.

guidance. While the team was proficient in that it was able to design and build a vehicle that was functional, it turned out that the vehicle's tether was too short, hindering its range of motion in the pool. Despite this shortcoming, everything else worked well.

Bob Lobecker, of TMS coordinated the efforts of 14 judges from industry and academia to review technical papers, posters, oral presentations and mission performance.

This was Lobecker's third stint as a judge - his first time as the head judge - and he attributes the enthusiasm of the kids and the competition for keeping his interest.

"These kids are the best and the brightest. They are so enthusiastic even in the face of a completely failed mission. They learn from the experience and vow to come back next year to win. The kids that enter this event are clearly the cream of the crop as illustrated by the colleges they will

attend next fall such as MIT, URI, Webb Institute for Yacht Design Rutgers Marine Science Program, Clark University, USC San Diego, Brown University, US Naval Academy and Keene State College.

In most cases the teams that invested the most time testing and evaluating their vehicles enjoyed the most success. Nearly unanimously the teams felt that additional time should have been budgeted to test and evaluate their vehicles before coming to the competition. In a few cases, the competition was the first time they actually were able to "fly" their vehicles in a pool. They were all submerged in various tanks, tubs and vessels filled with water, but few had the opportunity to actually operate in a pool.

One exception to this rule was the team from the Greater New Bedford Vocational Technical High School (GNBVTHS), which was successful at getting its vehicle completely operational in a very short peri-

Applying Advanced Technology to Today's Problems For 28 years the Systems Development Division has been the leader in innovative design and technology of fast vessels while also performing as a general naval architecture firm doing projects ranging from designing the water jet propulsion for a tracked amphibian to the FEA of an entire cruiser's structure to supporting the City of Baltimore's new fireboat acquisition. The senior staff has remained with the Division for more than 20 years and has developed valuable corporate capabilities with unique and innovative design and analysis tools. The Division is particularly well known for its early-stage design of fast vessels, as well as conventional ships and craft. Its development of cutting edge design tools is evidenced by the numerous technical papers that have been published by its staff members and cited in references by others.



CDI Marine

Systems Development Division

Contact: David R. Lavis, General Manager
900 Ritchie Highway, Suite 102
Severna Park, MD 21146
410-544-2800
E-mail: david.lavis@cdicorp.com

Visit www.maritimeequipment.com/mt & Click No. 201

od of time, a fact that helped to earn them the Judges Award. They were one of six ROV teams that built a vehicle during a semester long course. The assignment was to build a vehicle to the MATE event specifications, and the team designed and built theirs in just nine days. The team received 110 points in the pool mission and 185 points overall, ranking them third for the in-water portion of the competition.

The success of this year's competition is partly due to the generosity of the sponsors, who provided a total of \$4,000, enabling the judges to increase the cash prizes for first and second places to \$500. The increased

amount will help defray the expenses for the teams to travel to Houston for the Nationals in June. Sponsors such as Lockheed Martin Sippican, SAIC, Bluefin Robotics, McLane Research Laboratories, Woods Hole Marine Systems, SeaBotix, Trinity International, Technical and Marketing Services, and Webb Research provided the funds for the cash prizes to support the future of the industry.

Next year the nationals will be held at Memorial University in New Foundland in the ice research facility. The mission next year will relate to operating ROVs in and around ice.



Left:
The Sound School Team 1: L-R Team members: John Boak, Jeremy Dunn, Seth Cooley, Jonathan Collingwood, Anthony Wnuk, Zach Bartell, Susan Findlay, Caitlin Loller, Jae Brochu, Jonathan Baylor, Rick Kollanda.

(Photo credit: Maggie Merrill)

Right:
Greater New Bedford Vocational Technical High School ROV team L_R Raul Tirado, Peter Conway, Kevin Johnson won the Judges Award.

(Photo credit: Maggie Merrill)



Left:
Rogers High School from Newport, RI, reading the latest issue of MTR! L-R: Teacher, Scott Dickson with students; Athena Turner, Seth Maynard, Nick Tovino, Allison Lopes.

(Photo credit: Maggie Merrill)

IXSEA Debuts New SAS Vehicle and New Survey Vessel

news

By Maggie L. Merrill

IXSEA, headquartered in Marlay le Roi, France specializes in navigational, subsea positioning and imagery systems and solutions. This spring the company launched SHADOWS, a new Synthetic Aperture Sonar (SAS) device which is tethered to a ship and towed at specific depths and distances from the ship. As a towed body, it is robust and rugged for rough sea conditions.

According to Anne Berg, of IXSEA, SHADOWS is the first commercially available off-the-shelf Synthetic Aperture Sonar (SAS) on the market. It is designed to be a quick and efficient high-performance sonar system with synthetic aperture processing, which offers unparalleled image quality in real-time. IXSEA's CEO Thierry Gaiffe hopes that SHADOWS will set a new industry standard for all sidescan sonar surveys. "This turnkey integrated survey solution provides real-time, georeferenced mosaic output with 15 cm resolution over 600 m swath with full coverage directly beneath the transducer, therefore cutting survey time and costs."

SHADOWS side scan towed fish can be used for cable routing, offshore mining, pre-dredging surveys, small objects search on the seabed and shipwreck search and salvage. Not surprising is the fact that SHADOWS is compatible with GAPS and POSIDONIA, IXSEA's Ultra Short Base Line (USBL) positioning systems.

SHADOWS includes SAS processing, Gap filler frontal sonar module, GPS interface and gigabit data link. It is indeed the full package with fish towing system, workstation, software, raw data storage and backup solutions.

IXSEA, has a history of developing and providing innovative technology and experience with for obtaining all sorts of images from the sea floor. It also integrates seismic, sonar and magnetometer imagery data in one spot for easy interpretation.

Pictured on the next page is IXSURVEY's newest vessel, the IXSURVEY, a 37-m ship that accommodates an operational crew of six and up to six guests. It was recently com-

Looking for a precision navigation solution?



Discover Teledyne RD Instruments' family of Doppler Velocity Log (DVL) products. From small littoral vehicles, to deep water UUVs, to military divers, we're sure to have an acoustic Doppler solution to meet your needs.

With hundreds of DVLs in operations around the globe, only Teledyne RD Instruments can offer you the technology you need and the experience you deserve. For more information

visit www.dvlnav.com or call +1-858-693-1178.

 **TELEDYNE
RD INSTRUMENTS**
A Teledyne Technologies Company



Visit www.maritimeequipment.com/mt & Click No. 218



The new IXSEA Synthetic Aperture Sonar Towed fish aboard the new IXSURVEY vessel.

(Photo Credit: Maggie L. Merrill)

pletely refurbished and has been outfitted with state-of-the-art equipment. The bridge, for instance has a camera system whereby all gauges in the engine room can be visually inspected. The video system enables 360 visibility from the bridge. The ship is skippered by Francois Haulet, and there are several talented surveyors ready

and willing to conduct surveys of all sorts. The ship can accommodate just about any type of survey equipment, not just the IXSEA instruments.

Triton Software Passes NATO UUV Trials

Triton Imaging reports that its AUV-Suite post-mission analysis (PMA) software participated in recent Unmanned Underwater



Vehicle (UUV) Mine Countermeasure trials conducted by the NATO Undersea Research Center (NURC). The Triton software was used by the Royal Norwegian Navy with its HUGIN 1000 vehicle to process sidescan and multi-beam data and to acquire, analyze, and identify targets during the exercise. The configuration of the AUV-Suite during the exercise consisted of the four-screen display shown in the image below.

The Commander, Mine Warfare Command (CMWC) UUV Platoon evaluated the performance of Triton's software during the exercise and made the following recommendation, "The Triton Imaging, AUV-Suite PMA software had robust and advanced capabilities with an operator-friendly graphical user interface, better than any PMA software package observed or used by the UUV Platoon. Incorporation of this software or another package with similar features is recommended for any shipboard U.S. UUV system."

SUBCONN® CONNECTORS, DEPENDABILITY AT EVERY LEVEL.



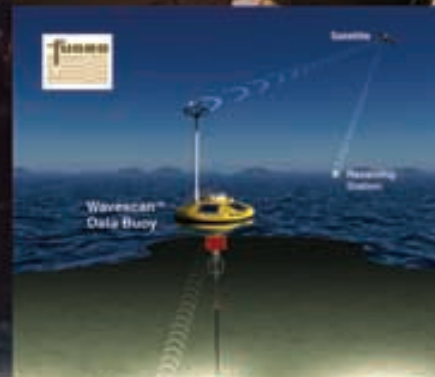
More than 25 years after introducing our high performance "o-ring" design, Subconn® continues to lead the way offering the most reliable connections possible in wet environments.

Relentless testing. Uncompromising quality. And a worldwide reputation for outstanding delivery and service. With dependability at every level, it's no wonder so many have come to trust the original.

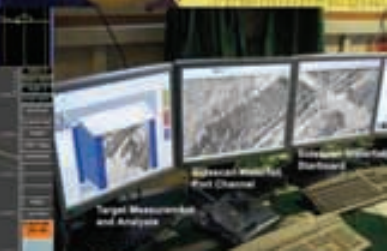
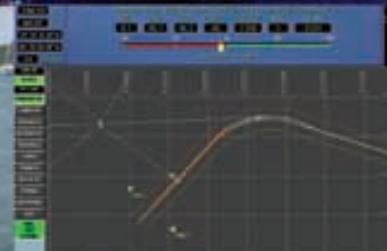
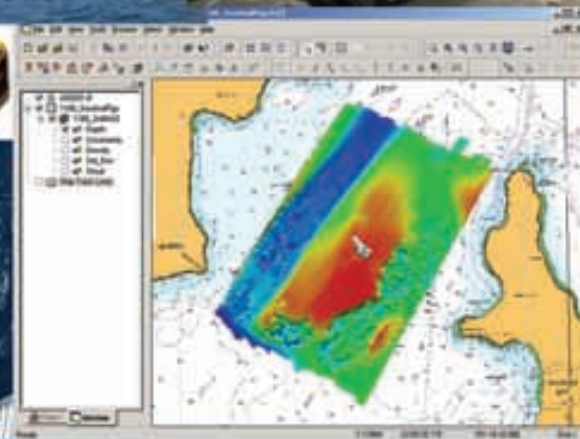


Toll Free: 1 888 245 1104 • International: +45 7613 2000 • www.subconn.com

Visit www.maritimeequipment.com/mt & Click No. 217



MTR 1000



Aandera Instruments

P.O. Box 34 Slåtthaug, 5851 Bergen, Norway
Nesttumbrekken 97, 5221 Nesttun, Norway
Tel: +47 55 60 48 00; Fax +47 55 60 48 01
E-mail: info@aadi.no

Aanderaa Instruments develops, manufactures and markets oceanographic and meteorological instruments and special systems for collecting environmental data. Data can be stored internally in a highly protected memory or transferred in real-time via cable, VHF/UHF radio, satellite, modem or GSM.

A common technology base and standardization allows for off the shelf delivery (of individual instruments as well as larger systems) for a vast area of applications including ocean research and coastal research, vessel traffic systems in ports and harbors, offshore surveying, fish farming, Hydrography as well as fresh water monitoring (including waste water) and weather monitoring including monitoring road conditions. Aanderaa Instruments has manufactured and supplied about 20,000 oceanographic instruments worldwide.

AC-CESS Co UK Ltd.

Tyrebagger Works, Clinterty, Kinellar
Aberdeen AB21 0TT, UK
Tel: +44 01224 790100; Fax: +44 01224 790111
E-mail: info@ac-cess.com

AC-CESS offers what it calls a groundbreaking new small ROV developed by AC-CESS and its engineering partners All Oceans - the AC-ROV. AC-CESS specializes in technology associated with getting real time visual and sensory data from inaccessible locations and hazardous environments.

The company envisioned an underwater inspection ROV that would appeal to a wide market of current ROV users and new buyers. The AC-

ROV system is designed to be portable, mobile and easy to control.

- Portable: The entire system comes in an airline cabin baggage sized case.
- Mobile: Six internally housed vectored thrusters allow the AC-ROV to have complete freedom of movement underwater, giving excellent control and viewing.
- Easy to Control: The 'space-mouse' is a one handed control device.
- Small: The AC-ROV has a 190 mm down pipe fly through.
- Flexible: Connect the tether cable to the rear, top or bottom to suit your site and dive plan.

Applied Science Associates, Inc.

70 Dean Knauss Dr, Narragansett, RI 02882-1143
Tel: 401-789-6224; Fax: 401-789-1932
E-mail: nvwhittier@appsoci.com
CEO: Eoin Howlett
President: Eric Anderson
Marketing Director: Nicole Whittier
Number of Employees: Between 25-40

Applied Science Associates (ASA) is a leader in the development and application of computer tools to investigate marine and freshwater environments. Using computer models to simulate physical, chemical, and biological processes, ASA answers questions about the surface water environment and human interaction within that environment. ASA identifies timely, reliable, and cost-effective solutions to environmental problems and helps manage information through the integration of Geographical Information Systems (GIS) with environmental data monitoring and modeling.

Technology Profile

Applied Science Associates, Inc. (ASA) develops and uses computer

modeling tools to address some of the greatest challenges regarding water pollution, from permeating facilities to oil spills. ASA's solutions extend from routine analytical approaches to multidimensional computer models that simulate physical, chemical, and biological processes in marine and freshwater systems.

Autonomous Surface Vehicles

Contact: Stephen Phillips, Managing Director
Unit 3, City Business Centre, Basin Road, Chichester,
West Sussex, UK PO 198DU
Tel: +441243784222
E-mail: Info@asv.org.uk
Internet: www.asv.org.uk
CEO: Hugh Young; President: Stephen Phillips
Vice President: Dan Hook
Number of Employees: 5

ASV Ltd (www.asv.org.uk) designs, constructs and supports a range of autonomous surface vehicles for survey and surveillance operations. These craft can operate in rough seas (up to and including Seastate 5) with an endurance of between 24 hours to a month, at speeds of up to 15 knots. They have a wide range of applications and are currently employed in commercial survey and technical research for civil and military organizations.

AXYS Technologies Inc.

PO Box 2219, 2045 Mills Road West, Sidney, British
Columbia, Canada V8L 3S8
Tel: +250-655-5850
Fax: +250-655-5856
E-mail: jholding@axys.com
CEO: Harry Weiler
Marketing Director: Don Bryan
Number of Employees: 30
Annual Sales (US\$): \$4 million

AXYS Technologies Inc. (AXYS) is a Canadian company with more than 30 years experience in the design, manufacture and installation of environmental monitoring systems. AXYS also provides technical field services to train and support customers in the operation and maintenance

MTR100

nance of our products.

AXYS is a leader in meteorological, oceanographic and water quality data acquisition systems. Its products include the TRIAXYS Directional Wave Buoy and the Watchman500-based meteorologi-



cal buoys that are used in the Canadian National Data Buoy Network, one of the largest marine weather forecasting networks in the world. All systems provide real-time or near real-time data to the end user, with a wide range of data telemetry solutions including radio, cellular phone, and satellite communications.

Technology Profile

AXYS has a history of developing, testing, commercializing and manufacturing Environmental Monitoring Systems. Marine products include moored buoys for weather, wave and sea state forecasting, as well as specialized buoys for research and development of new sensors, power supplies, and other buoy components. Products such as Watchman500, WatchKeeper, AVOS, Sentinel and TRIAXYS are all examples of successful product developments. Today TRIAXYS is a popular directional wave buoy and sensor and AXYS holds three TRIAXYS design patents in the U.S., U.K. and Canada.

AXYS' most recent hallmark product is the Watchman500 Network Solution, a remote monitoring platform that can be deployed in any location or environment. It offers a reliable data collection and distribution system for sensor networks. It has two-way communication capabilities and is the ideal solution for long-term data acquisition from remote locations. The Watchman500 Network Solution has the capability to interface with any custom or off-the-shelf sensor allowing for easy initial installation and equipment upgrades. Using AXYS' Data Management System, the user has complete control over the configuration, control and expansion of their monitoring network and allows users to view important system information in virtually real time.

Balmoral Offshore Engineering

Chairman and MD, James S Milne CBE DBA (Hon)
Balmoral Park, Loirston, Aberdeen, AB12 3GY, UK
T +44 (0)1224 859000; F +44 (0)1224 859059
offshore@balmoral.co.uk
www.balmoraloffshore.com
Number of Employees: 307
Sales: \$56.8 m

The company comprises a number of distinct business units and divisions including Balmoral Advanced Composites, Balmoral Offshore Engineering; Balmoral Tanks and Balmoral Wellbeing. These operations function autonomously under the auspices of their respective management teams.

Technology profile

With a solid foundation in polymer and elastomer design and manufacturing history, Balmoral Offshore Engineering provides the international energy, oceanography and defense sectors with a range of products from cable and flowline protection to surface and deepwater buoyancy.

In-house laboratory and hydrostatic testing facilities enable the company to research and identify cost effective materials across a spectrum of applications. From surface navigation to buoyancy some 3000m below the surface, Balmoral products, including rigid and

Moving ROV Systems in a New Direction

introducing

VECTOR L4

and

VECTOR M5

DEEP OCEAN

ENGINEERING

(510) 562-9300

www.deepocean.com

customersolutions@deepocean.com

Visit www.maritimeequipment.com/mt
& Click No. 202



J.S. Milne, CEO

dynamic riser, ROV/AUV and subsurface buoyancy through to elastomer cable protectors, bend restrictors, stiffeners, clamps and riser protection guards, are in use around the world. Providing a service from concept development through detailed design, manufacturing and testing, Balmoral can help maximize potential.

BAE Systems Naval Ships

Naval Ships South Street, Scotstoun, Glasgow G14 0XN, United Kingdom
 Tel: +44 (0) 141 959 1207; Fax: +44 (0) 141 958 0642
 Executive Directors (BAE SYSTEMS)
 Chris Geoghegan
 Steve Mogford, Chief Operating Officer
 Mark Ronald, COO and President BAE Systems Inc.
 George Rose, Group Finance Director
 Mike Turner, Chief Executive Officer

The Naval Ships business was

formed in 2003 to provide a focus on the UK and export surface warship building market. The business provides prime contracting services, design capability, shipbuilding facilities and complete naval systems integration skills to support all aspects of UK and export warship provision.

The Naval Ships organization operates the company's shipyards in Scotstoun and Govan in Glasgow. It is also responsible for running the Type 45 Destroyer Prime Contract Office in Filton, near Bristol.

Naval Ships is responsible for providing the company's surface warship capability from Prime Contract management to systems integration and delivery of completed vessels.

Naval Ships is responsible for managing the contract and delivering three 95-metre long Offshore Patrol Vessels to Brunei.

The first vessel was launched in

January 2001 and, following rigorous sea trials, is due for delivery early in 2004. The other vessels will follow as they complete their inspection and trials programs.

Battelle

505 King Avenue, Columbus, Ohio 43201
 Tel: (800) 201-2011; (614) 424-6424
 Internet: <http://www.battelle.org/>
 CEO: Carl F. Kohrt

Battelle is a global science and technology enterprise that develops and commercializes technology and manages laboratories for customers. Headquartered in Columbus, Ohio, Battelle has a vast science and technology reach. Battelle, with the national labs it manages or co-manages, oversees 19,000 staff members and conducts \$3.4 billion in annual research and development. Battelle teams with more than 800 federal, state and local government agencies, providing science and technology in

Teledyne Benthos

49 Edgerton Drive, North Falmouth, MA 02556
 Tel: 508-563-1000; Fax: 508-563-6444
 E-mail: pzentz@benthos.com

CEO and President: Ron Marsiglio • Vice President: Francois Leroy • Marketing Director: Peter Zentz • Sales Manager: Francois Leory
 Number of Employees: 150 • Annual Sales: \$25 million

Teledyne Benthos is a provider of high technology products and integrated systems that are used for measurement, inspection, data collection and communication in remote and challenging marine environments. Benthos, Inc. was founded in 1962 in North Falmouth, Mass., as a supplier to the nearby Woods Hole Oceanographic Institution. The company grew through the acquisition of product lines and the development of new technology. Benthos was acquired by Teledyne Technologies Incorporated in January 2006. The company is ISO 9001 certified and maintains a worldwide network of independent sales representatives.

Technology Profile

Products include geophysical survey systems, side scan sonar systems, glass flotation spheres, acoustic releases, hydrophones, underwater modems, pingers and other oceanographic products for both deep and shallow water applications. Markets include military, undersea research, oil and gas, fisheries and deep sea survey. Recent developments include the SMART combined release and modern product line which enables users to monitor and retrieve data from their subsea instruments and release the entire package of instruments successfully to the ocean's surface at a later date.

Stingray ROV



the areas of national security, homeland defense, health and life sciences, energy, transportation and environment.

Technology Profile

* Lithium Hydroxide Curtain: This removes hazardous carbon dioxide from the atmosphere of disabled sub-

marines. The curtain improves the crewmembers' ability to survive while awaiting rescue.

Every submarine in the U.S. Navy's fleet has been outfitted with the life-saving curtains.

- NR-1 Submarine Sonar: Battelle took on the challenge of modernizing

the sonar system for the U.S. Navy's NR-1 nuclear-powered submarine while keeping costs at a minimum. Battelle staff selected off-the-shelf technology, re-engineered it to improve its efficiency and installed the sonar system at about one-fifth the cost of a custom-made model, in a fraction of the time.

USCG APPROVED & STCW-95 COMPLIANT TRAINING COURSES

USCG Approved

OUPV To Master 200GRT/500GT,
Able Seaman & PSC,
QMED-Oiler (OSV),
Tankerman PIC (Barge),
Apprentice Towing Mate Steersman,
Basic & Advanced Fire Fighting.

STCW-95

BRM, BST, RADAR, ARPA,
Survival Crafts/Lifeboats,
GMDSS, Medical Care Provider,
Celestial Navigation (Oceans),
RFPNW & RFPEW Programs
Crowd Control (Management).

OTHER COURSES

Designated Examiner Training
Meets the Training Requirements for
Towing Vessel DE

Sea School operates 8
fixed facilities. Our
Mobile, AL Campus
offers free
Bed & Bread



SEASCHOOL.COM
1-800-BEST-ONE

CARRILLO Underwater Systems

Commemorating 25 years
of Diving Equipment Excellence

Limited Edition



SquawkBox 25le

Classic Craftsmanship from the Past
High Performance Modern Components

888.728.2226

541.469.8009 (f)

www.CarrilloUnderwater.com

Visit www.maritimeequipment.com/mt & Click No. 215

Visit www.maritimeequipment.com/mt & Click No. 200

Birns

1720 Fiske Place, Oxnard, CA 93033
 Tel: 805-487-5393; Fax: 805-487-0427
 E-mail: service@birns.com
 Internet: www.birns.com
 CEO: Eric Brins

Founded in 1954, Birns, Inc. is a manufacturer of high-performance lighting and connector systems for deep-ocean and nuclear use. In addition to the Snooper, Kelvin, Corona and Blackburn, BIRNS manufactures more than 40 other types of lighting products, and six different connector ranges. Connectors include Aquamate wet-mateables and Millennium high-density deep-submergence styles.

Technology Profile

Birns Marine Lighting Products

operate within marine and aquatic environments, especially deep underwater, e.g. on submarines, remotely operated vehicles, and by commercial divers. BIRNS Flood Lights are general-purpose luminaires to illuminate large underwater areas, e.g. around piers and docks, or underwater inside marine or aquatic parks. Examples are: Model 5441 BIRNS Snooperwide; Model 4010 BIRNS Sirius; Model 4015 BIRNS Sirius (Metal-Halide)

BIRNS ROV/SUB Lights are used on Remotely Operated Vehicles (ROVs) or manned submarines and submersibles, and provide both general and task illumination. Various voltage inputs, power outputs, and beam angles are available. Depth

capabilities to 6km. Examples are: Model 5101 BIRNS SOR-I; Model 5120 BIRNS SOR-I, Deep-Submergence; Model 5131 BIRNS SOR-II; Model 5134 BIRNS SOR-II, Deep-Submergence; Model 5651 BIRNS XT120; Model 5657 BIRNS Varilite; Model 5659 BIRNS Varilite, Deep-Submergence; Model 5660 BIRNS Snooperette.

BIRNS Connector Products transmit electric power and data underwater. They are:

- Millennium (miniature, coaxial, fiber-optic)
- Metal Shell (very heavy duty applications)
- Rubber (basic, low cost)
- Aquamate (wet/underwater mating)

Seaeeye Marine Ltd

Lower Quay Rd, Fareham, Hampshire, United Kingdom PO16 0RQ
 Tel: +44 1329 289000; Fax: +44 1329 289001
 E-mail: rovs@seaeeye.com
 CEO: Chris Tarmey • Managing Director: Matt Bates
 Engineering Director: Jon Robertson • Sales Director: Dave Eggers
 Number of Employees: 55
 Annual Sales (US\$): \$12 million

Seaeeye has, since the late 1980's, been a supplier of electric powered ROVs to the offshore oil and gas industry with more than 250 systems operating worldwide in this sector conducting everything from diver support, pipeline survey, and drill support to IRM and light construction tasks. In 2002 Seaeeye introduced its first ROV built to offshore standards but aimed at the requirements of coastal and inshore operators.



Russian Navy Panther Plus+TMS.

This Falcon ROV has since become a leading product in its class with sales of around 75 systems achieved by mid 2006.

Sales and marketing activities for Falcon and the new deeper rated Falcon DR has introduced Seaeeye to a much wider audience beyond oil and gas resulting in sales of Lynx, Tigers, and Panther Plus to vari-

ous navies, research organizations and environmental groups including the Russian Navy who use their Panther Plus for submarine rescue operations and the French Navy who use theirs for torpedo recovery.

Technology Profile

Seaeeye pioneered the use of brushless DC motors for reliable use in ROV thrusters and were the first to use modern plastics and composite materials in the construction of ROV frames and electronics pods.

Seaeeye's Falcon is the first vehicle in its class to make use of modern distributed intelligence in the control system that improves reliability and ease of use but also adds to the inbuilt diagnostics capability of the system and reduces the weight of the vehicle by eliminating a heavy electronics pod.

The company is currently working on new deeper rated and more powerful systems to further extend the product range. This includes not only further thruster developments but also new control technology, station keeping and power distribution techniques.



Chris Tarmey, CEO

- Polymeric (mid-range applications)
- Penetrators (pressure boundary penetration)
- "Portsmouth" (MIL-C-24231)

Bluefin Robotics

237 Putnam Avenue, Cambridge, MA USA 02139
 Tel: 617-715-7082; Fax: 617-498-0067
 E-mail: babraham@bluefinrobotics.com
 CEO: Dr. Brian Abraham
 Number of Employees: 65
 Annual sales: \$10 million

Starting in 1989, the MIT Autonomous Underwater Vehicle Laboratory pioneered AUV platform technologies. The 15-year long progression from the SeaSquirt to the current Bluefin AUV components,

power systems and platforms has led to dramatic gains in capability, performance, and applicability. Capable of reaching the sea floor and robust enough to be deployed in the Antarctic and the Labrador Sea, the Bluefin team has proven that AUVs can be a reliable, affordable tool to the academic, commercial, and military community. In particular, the Bluefin AUV is the standard vehicle for the scientific community. Woods Hole Oceanographic Institution, Oregon State University, MIT, MBARI, and Florida Atlantic University have all placed orders for AUV systems from Bluefin. Founded in 1997, and headquartered just

blocks from the MIT laboratory that created its core UUV technology, Bluefin Robotics has grown to a 65-employee company whose design, production, and operations facilities occupy two locations in the Boston area. To date, Bluefin has built (or is producing) a total of 40 UUVs for military, commercial and academic customers. Bluefin's AUV technology is built on 15 years of effort and over \$40 million of AUV R&D funding.

Technology Profile

Since 1999, Bluefin has been a profitable organization and has expanded its product portfolio to include several classes of vehicles and peripheral

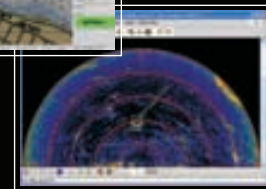
Defend...

against underwater intruders with the SM 2000 underwater surveillance system

SM 2000 Features

- Single operator control: real time auto detection, classification, tracking and alert
- Multiple deployment options
- >800 meter detection ranges for divers and swimmer delivery vehicles
- Easy integration with existing generic processing platforms
- 'Sensor only' or complete underwater security systems available

The SM2000 Underwater Surveillance system is currently deployed by USN, USCG and other NATO aligned countries.



Underwater instrumentation ▶ SONARS ▶ TELEMETRY ▶ POSITIONING ▶ HYDROGRAPHIC ECHO SOUNDERS ▶ CAMERAS AND LIGHTS ▶ AUTONOMOUS UNDERWATER VEHICLE

Kongsberg Underwater Technology, Inc., USA +1 425 712-1107
 Norway: +47 33 03 41 00, UK: +44 1224 22 65 00,
 Italy: +39 06 615 22 476, Singapore: +65 68 99 58 00

www.kongsberg.com
 e-mail: km.sales.lynnwood@kongsberg.com



KONGSBERG

Visit www.maritimeequipment.com/mt & Click No. 208

products including the following: Bluefin 9: 9-in. diameter AUV; Bluefin 12: 12-in. diameter AUV; Bluefin 21: 21-in. diameter AUV; HAUV: Hull inspection AUV; Spray: Bluefin glider AUV; Power Systems: Ranges of Lithium Polymer oil compensated battery systems.

Subsystems and System Integration: In addition to these platform products, Bluefin has been successful developing and acquiring derivative products and spirally integrating these into the platforms. Several of

these products categories are outlined below: Navigation systems; Propulsion systems; Communication systems; Sensor payloads; Sonar Systems; Buried Object Systems; Magnetometer Systems; Environmental Sensors Systems; Lethality Systems; Deck box systems; Undersea battery systems.

Brooke Ocean Technology

11-50 Thornhill Drive, Dartmouth, Nova Scotia, Canada B3B 1S1
Tel: +1902-468-2928; Fax: +1902-468-1388
E-mail: sales@brooke-ocean.com

Brooke Ocean Technology Ltd. (BOT) provides hardware, systems engineering and R&D services to the marine science, naval and oil & gas sectors. Its specialty is the development of equipment and systems to operate in harsh marine environments. BOT is a Canadian owned and operated company and is owned and managed by the two company shareholders.

BOT has been involved with the design and development of marine and oceanographic equipment for

Carrillo Underwater Systems

Contact: Rob Carrillo

PO Box 6217, Brookings, OR 97415 • Tel: 888-728-2226; Fax: 541-469-009 • E-mail: robc@carrillounderwater.com • Internet: www.carrillounderwater.com

CUS has been manufacturing C-Lites for more than 15 years, for use around the world and used in the harshest marine applications. Some customers still have their C-Lites in operation after seven years. Now special computer designed reflectors enhance the capabilities of the custom made high intensity halogen lighting elements, making C-Lites the choice for underwater video photography. In 1999 CUS introduced a new design for the C-Lite shell. Molding specialists assisted by advanced computer design systems created a compact, more functional design without sacrificing any of the necessary design requirements of the C-lites CUS Cam 1501 - The CC 1501 color underwater video camera is a high resolution 450 line low light color video module housed in a machined 1.7 dia. x 4.75 long Delrin cylindrical housing with double hardened polycarbonate front and rear ports. The threadless assembly is durable and practical. The CC 1501 weighs mere grams in water. This is a great feature for both head mounted and remote applications. The camera has a 72 degree horizontal field of view. The low light capability is 1 lux. The CC 1501 is specially built for long line transmission. The integral LED illumination allows for image gathering in small or hard to access locations where external lighting is not practical and natural lighting is insufficient. The LED lighting is always on so if the main lighting fails or cannot be used the LED illumination will afford image gathering where other cameras will not. The CC 1501 operates with a 400ma maximum current. This makes it a very viable option for long line applications.

C-lite Deep Reach - The C-Lite Deep Reach supplies lighting. The C-lite DR is a rugged anodized aluminum light housing with a double hardened polycarbonate front lens and a special integrated rear connecting light socket bulkhead connector. The rear connector incorporates a male 2 pin Marsh type underwater bulkhead connector with an integrated two pin MR16 style light socket inside. No wiring!

CDI Marine Systems Development Division

900 Ritchie Highway, Severna Park, MD 21146 • Tel: 410-544-2800; Fax: 410-647-3411 • E-mail: RobertS.Johnson@cdicorp.com

CEO: Roger Ballou is President and CEO of the \$3 Billion parent corp.

Vice President: Mark Kerschner, Executive Vice President and CFO

Number of Employees: 38 (Systems Development Division) • Annual Sales: \$5 million (Systems Development Division)

For 28 years, since its formation as Band, Lavis & Associates in 1977 (and its continuation since 1998 as CDIM-SDD), the company has focused on the innovative design and technology of fast vessels while also performing as a general naval architecture firm doing projects ranging from the FEA of an entire cruiser's structure to supporting the City of Baltimore's new fireboat acquisition. The senior personnel have remained with the company for more than 20 years and have developed valuable corporate capabilities with unique and innovative design and analysis tools. The company is particularly well known for its early-stage design of fast vessels, as well as conventional ships and craft. Its development of cutting edge design tools is evidenced by the numerous technical papers that have been published by its staff members and cited in references by others.

Ship design and analysis of high speed craft (ACVs, SESs, Catamarans, Trimarans, etc.) and conventional ships and craft. Design of high powered axial flow waterjets. Support to governmental activities for the procurement of specialized craft.

more than 20 years and has a track record as a company that can solve problems with simple, yet innovative designs.

One of BOT's primary areas of specialization is in the development of shipboard launch and recovery systems (LARS) to deploy and recover various payloads from a ship at sea. This includes LARS for Autonomous Underwater Vehicles (AUVs) and unmanned surface vehicles (USVs). BOT also has extensive experience with shipboard installations and testing at sea.

BOT is a leader in the development and supply of sensor platforms for moored and underway use. This includes SeaHorse, a wave powered

sensor platform which utilizes surface wave energy to move up and down a mooring wire. BOT's Moving Vessel Profiler™ (MVP) collects free fall data profiles from ships underway at speeds of up to 18 knots.

Engineering Services offered by BOT include the following:

- Machine design
- Hydraulic systems design
- Design, analysis and development of towed systems
- Design, analysis and development of moored systems
- Material handling systems design
- System engineering and project management
- Mechanical packaging and rack-mounting of electrical/electronic

hardware

- 3-D imaging and animation
- Structural analysis
- Engineering drafting services

C&C Technologies, Inc.

730 East Kaliste Saloom Road, Lafayette, LA 70508

Tel: 337-261-0660; Fax: 337-261-0192

E-mail: info@cctechnol.com

CEO: Thomas Chance

President: Thomas Chance

Vice President: Jim Chance

Marketing Director: Mike Dupuis

Sales Manager: Mike Dupuis

Number of Employees: 300

Annual Sales: \$60 million

Thomas and Jimmy Chance quickly assembled a team of diverse experts that shared their entrepreneurial spirit. Initially, C & C was operated out of a home office with five employees, but has now grown to more than 300

Providing Vital Solutions for Your Undersea Communications Needs

Only one company can offer the latest technology, vertically integrated capabilities and U.S.-based operations to meet your most vital undersea communications needs. Only one supplier has the combination of an industry-recognized track record and proven history of technological breakthroughs that ensures you'll get the most reliable, high-performance system available. Only Tyco Telecommunications.

Whether you need an undersea system that's designed, built and deployed to your exact specifications, or the latest upgrades for an existing network, Tyco Telecommunications can deliver the right solution. We command the industry's most advanced, strategically deployed and cost-effective fleet, to provide you with the maintenance and marine services you need to reliably operate your system for years to come.

Tailored solutions, responsive support, and a heritage second to none.
Tyco Telecommunications: industry pioneers
charting a steady course to the future.

www.tycotelecom.com
 sales-hq@tycotelecom.com
 1.866.892.6611

tyco Telecommunications

Visit www.maritimeequipment.com/mt & Click No. 219

employees in seven locations. C & C is headquartered in Lafayette, La., and has additional offices in Houston, Singapore, Brazil, Mexico, South Africa and the U.K.

C & C provides a range of survey and mapping services for the land and offshore oil and gas industry, the telecommunications industry and several government entities. The company has six divisions including; the Land and Transition Zone Survey Division, Marine Construction Survey Division, Geophysical and Geosciences Division, NOAA Surveys Division, Geotechnical Division, and the Worldwide DGPS Services Division. Several in-house departments including a Database, Systems Development, Information Technology, HSE, and QA as well as a mechanical fabrication department support all C & C operational divi-



C-Surveyor II

sions.

Technology Profile

C & C's Geophysical Division has

equipment to collect high-resolution data from shore to full ocean depth, worldwide. This division provides solutions with side scan sonars, two C-Surveyor deepwater AUVs, seismic systems, cesium magnetometers, and multibeam bathymetry systems.

C & C Technologies' geoscientists provide geophysical interpretation based on exploration-quality 3D seismic data. This data is used for shallow stratigraphic studies, assessment of shallow water flow potential and for assessing initial indicators for the presence of chemosynthetic communities. These studies are ideal for initial pipeline route planning and MMS deepwater site clearances.

C & C's Marine Construction Division provides surface positioning and acoustic subsea positioning (LBL, USBL, HAIN & Metrology) surveys.

Chelsea Technologies

55 Central Avenue, West Molesey, Surrey, KT8 2QZ, UK

Tel: +442084819000; Fax: +4402089419319

E-mail: sales@chealsea.co.uk

Internet: www.chelsea.co.uk

Chelsea Technologies Group operates from a 17,500 sq. ft. facility in Surrey, England. A team of experienced scientists and engineers are engaged in design, development, production engineering, process control and marketing of a wide range of individual sensors and distributed instrument systems. Applications include environmental monitoring, acoustics sonar, biotechnology and advanced optics.

Chelsea Technologies Group specializes in underwater technologies ranging from acoustics and sonar products through to comprehensive environmental monitoring systems.

Satisfying the needs of both the civil and military markets Chelsea provides towed oceanographic vehicles, multi parameter oceanographic sensors, acoustic sources and telemetry systems, echo repeaters and piezocomposite transducers plus world leading technology in AUV autopilots and correlation sonar velocity logs.

Following the merger of Chelsea Instruments and Marine Acoustics in December 2001, the Chelsea Technologies Group was formed. The merger brings together two of the leading companies within the marine science field. Chelsea Instruments has had more than 35 years experience in the design and manufacture of a range of sensors and towed vehicle systems for the civil and military markets. Marine

Acoustics has specialized in underwater acoustics and sonar system technology for more than 20 years. Together they provide a unique capability of total systems solutions for environmental technology through to military applications. Chelsea also provides consultancy services.

Expertise includes: Design, development & manufacture of equipments to full military specifications; Low power, low cost, high precision oceanographic instrumentation; Electro-optic sensor design; Assessment and feasibility studies; Bespoke sensor and system design; World leading technology in towed vehicle design; Technology transfer to and from Centers of Excellence; Accredited calibration facility; Oceanographic system integration; Project management; Trials support on board ships & submarines; Consultancy services

Products:

- FASTtracka: Award winning Fast Repetition Rate Fluorimeter designed to measure variable fluorescence of marine phytoplankton.
- AquaLine FerryBox System: Autonomous oceanographic data collection system for ships of opportunity. The system consists of a data collection system on a vessel with ability to transfer data to a Remote Access FTP server site, via a GPRS.
- MINITracka Mk II: Small, low cost fluorimeter available in chlorophyll, rhodamine, fluorescein, phaeophytin, phycoerythrin and nephelometer versions. Also available with flow through manifold for FerryBox and process control applications.

CapRock Communications

4400 S. Sam Houston Parkway, Houston, TX 77048
 Tel: 1-832-668-2300; Fax: 1-832-668-2388
 E-mail: info@caprock.com
 CEO: Peter Shaper
 President: Errol Olivier
 Vice President: David Myers
 Number of Employees: 225

CapRock Communications is a satellite communications provider for remote locations around the world. The company has expanded its capabilities worldwide to serve additional geographic and vertical markets with new technologies. The company utilizes the latest technologies to present its easily managed line of products and services.

CapRock Communications provides managed telecommunications

services that include, but are not limited to, basic telephony, IP telephony, video, Internet and corporate data access, presented in a variety of flexible formats.

CARIS

115 Waggoners Lane, Fredericton, New Brunswick, Canada E3B 2L4
 Tel: +506-458-8533
 Fax: +506-458-3849
 E-mail: info@caris.com
 CEO: Dr. S.E. Masry
 Number of Employees: 150

From its headquarters in Fredericton, New Brunswick, CARIS develops and supports rigorous, technologically advanced geomatics software for marine and hydrographic industries. Its systems give value to

spatial data and empower its customers with information that is meaningful. CARIS offers 13 compatible product lines that provide a complete 'Ping-to-Chart' solution from post-processing of bathymetric survey data to paper, raster and electronic chart production, to spatial database management and finally to Internet distribution. CARIS has installed its desktop charting technology and has trained staff in over 45 national hydrographic offices worldwide. CARIS was at the forefront of the movement toward computer-aided cartography and mapping since its founding in 1979 and is advancing geomatics technology further with its

Advanced line control from Measurement Technology NW

Control and monitor winch line speed, payout, and tension (cable and chain) in systems used for equipment deployment, fixed-place mooring, barge positioning, dredging controls, anywhere accurate and reliable line control is required.

At the winch... ..and on your PC

www.mtnw-usa.com
 206-634-1308
 lci@mtnw-usa.com

MEASUREMENT Technology NORTHWEST

Manufacturers of the LCI-90 and LCI-100 winch line displays (Standard, Dual Tension, Drum Counter, Quad), and WinchDAC

Visit www.maritimeequipment.com/mt & Click No. 209

open, flexible Internet and database-driven technologies. The CARIS customer base spans over 70 countries with in a broad range of applications and domains. Coastguard Agencies

use CARIS for the management of seaways, and offshore survey contractors use CARIS tools for the management of ocean survey data, and seafloor mapping. CARIS products

are used worldwide for safety of navigation, cable and pipeline routing, search and recovery, fisheries management and geophysical exploration, etc.

DeepSea Power & Light

Contact: Brad Fisher

4819 Ronson Ct., San Diego, Ca. 92111

Tel. 858-576-1261 • Fax. 858-576-0219

Email: sales@deepsea.com • Internet: www.deepsea.com

DeepSea Power & Light is a manufacturer of imaging and lighting systems whose innovative equipment is used daily for underwater applications. The company, founded in 1983, manufactures deep water power systems.

Technical Profile

DeepSea Power & Light's product line has grown to include underwater video and lighting systems. All of DeepSea Power & Light's standard products are designed to perform in the harsh marine environment, from wet/dry surface applications to full ocean depth deployments. Equipment manufactured by DeepSea Power & Light has been used in the Imax film *Titanica*, the theatrical release of *Titanic*, and *Ghosts of the Abyss*, also by the *Titanic Expedition*, *Bismark Expedition*, *National Geographic Society*, *Woods Hole Oceanographic Institution*, *Lockheed*, *Oceaneering*, *Scripps Institution of Oceanography*, and on the deep diving submersibles *Alvin*, *Sea Cliff*, *Jason*, *Turtle*, *Nautille*, *Mirs I & II*, *Kaiko*, and the *Shinkai 6500*.

Deep Ocean Engineering

Contact: Michael Gilson, Vice President, Customer Solutions

1431 Doolittle Drive, San Leandro, CA 94577

Tel: 510-562-9300; Fax: 510-430-8249

E-mail: mgilson@deepocean.com

CEO: Blaise Fetting

President: Joe Itchon

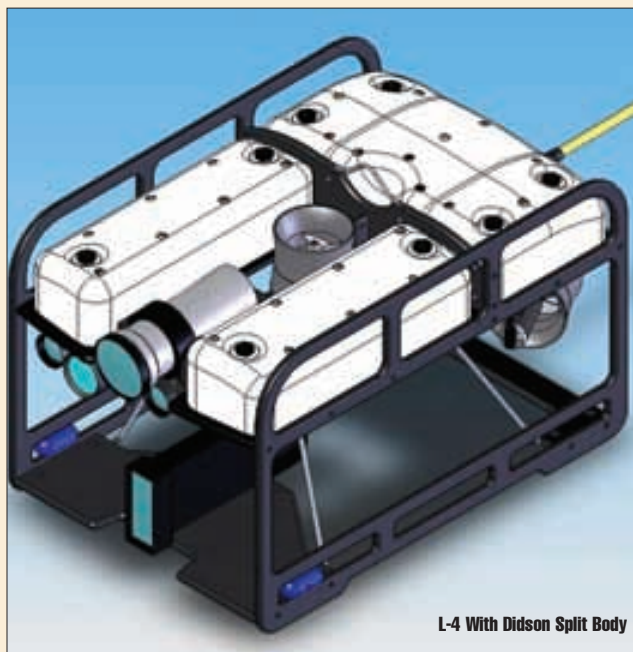
Vice President: Michael Gilson

Annual Sales: \$3 million+

Founded in 1982, Deep Ocean has more than 24 years of continuous operating experience in providing a wide range of innovative and cost-effective solutions for diverse industry applications. More than 500 ROV systems have been designed, built and delivered to customers in more than 30 countries. These include security, military, customs, nuclear, hydroelectric, inshore, offshore, oil and gas, scientific research and education, fisheries, salvage, broadcast filming, long tunnel and pipeline inspections. Customers include the military and security/law enforcement agencies of eighteen countries (including the U.S. Navy, Army Corps of Engineers, FBI, Canadian Defense and UK Customs), General Electric, Hydro Quebec, Westinghouse, Framatome, NASA, California Dept. of Fish and Game, various utility power companies and universities.

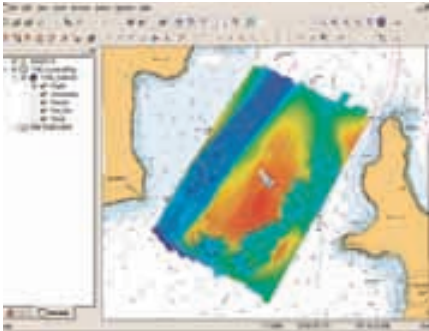
Technology Profile

Deep Ocean Engineering has recently introduced an advanced inspection-class ROV's. The all-new Vector Series ROV's are designed to be reliable, powerful vehicles that can carry the most advanced sonars, cameras and specialized instruments, all the while maximizing stability and control of the vehicle. By adopting digital telemetry, the Graphical User Interface provides a great more information



L-4 With Didson Split Body

to the ROV operator than had heretofore been available. This additional information not only includes details on the data being collected at the ROV but also on-condition monitoring of the ROV and its systems. Finally, the all-new brushless thrusters installed on all Vector Series ROV's are designed to be the most powerful and reliable available on any inspection-class ROV.



tions, seamless feature data management, and AML production tools. CARIS' history is one of long-standing involvement in projects and committees at the forefront of hydrographic technology and standards. Through liaisons with the International Hydrographic Organization CARIS has been closely involved in the development of the S-57, S-100, and other IHO standards.

Technology Profile

CARIS software tools are developed in cooperation with hydrographic clients and universities worldwide, and are built on decades of hydrographic experience. Key features are cutting-edge bathymetric innova-

Carrillo Underwater Systems

Contact: Rob Carrillo
 PO Box 6217, Brookings, OR 97415
 Tel: 888-728-2226; Fax: 541-469-009
 E-mail: robc@carrillounderwater.com
 Internet: www.carrillounderwater.com

(See Profile on page 20)

CDI Marine Systems Development Division

900 Ritchie Highway, Severna Park, MD 21146
 Tel: 410-544-2800; Fax: 410-647-3411
 E-mail: RobertS.Johnson@cdicorp.com
 CEO: Roger Ballou is President and CEO of the \$3 Billion parent corp.
 Vice President: Mark Kerschner,
 Executive Vice President and CFO
 Number of Employees: 38 (Systems Development Division)
 Annual Sales: \$5 million (Systems Development Division)

(See Profile on page 20)

Chelsea Technologies

55 Central Avenue, West Molesey, Surrey, KT8 2QZ, UK
 Tel: +4402084819000; Fax: +4402089419319
 E-mail: sales@chelsea.co.uk
 Internet: www.chelsea.co.uk

(See Profile on page 22)

Corrpro Companies

Contact: Spencer Turpin, Vice President S. Central Ops

REMUS 600

The Anatomy of Versatility

- ▶ **GO DEEPER**
 Standard operating depth 600 meters
 Optional housing configurations for 1500 & 3000 meter operating depths
- ▶ **GO FURTHER**
 Up to 70 hours at 3 knots depending on sensor configuration
- ▶ **FORWARD FINS**
 Provides a stable platform for sensitive sensors, such as, Synthetic Aperture Sonar
- ▶ **FULLY MODULAR**
- ▶ **CUSTOMER PAYLOAD BAY**
- ▶ **PROVEN REMUS TECHNOLOGY**
 Based on the same leading edge technology that brought the REMUS-100 to the forefront of autonomous operations with approximately 100 REMUS-100's in the field



Photo courtesy of the Italian Navy



Learn more about the REMUS 600 AUV at www.hydroidinc.com.



www.hydroidinc.com

6 Benjamin Nye Circle, Pocasset, MA 02559
 Tel 508.563.6565 • Fax 508.563.3445
 E-mail: sales@hydroidinc.com

Visit www.maritimeequipment.com/mt & Click No. 206

70008 Hollister, Houston, TX 77040
 Tel: 713-460-6000; Fax: 713-460-6060
 E-mail: Sturpin@corrpro.com
 President: David Johnson
 Marketing Director: Tim Wallace
 Sales Manager: Angie Pedraza
 Number of employees: 650
 Annual Sale: \$150 million

Corrosion control engineering, materials, design and testing. Third party coating supervision, World-wide offices to support the marine industry. Biofouling prevention systems for on-shore and off-shore facilities.

Leading edge research and development in the prevention of corrosion of marine structures. Provider of sacrificial and impressed current cathodic protection systems for the marine industry. Developer of biofouling prevention systems.

CruzPro Ltd.

35 Keeling Road, #A4, Henderson, Auckland, New Zealand, 1008
 Tel: +64-9-838-3331; Fax: +64-9-838-3332
 E-mail: info@cruzpro.com
 CEO: Bert van den Berg

Marine electronics manufacturer. Members of the NMMA (National Marine Manufacturer's Association), MIA (New Zealand Marine Industries Association) and NZmarine (New Zealand Marine Export Group).

CruzPro is a marine electronics manufacturer of precision digital gauges, monitors, alarms and control systems with NMEA 0183 communications capabilities. Manufacturer of PC based PcFF80 dual frequency sonar system for Win98, WinXP and Win2K. The sonar is software based,



The PcFF80 is a dual frequency PC based sonar costing less than \$1,000, including the transducer and software for WinXp, Win2K and Win98.

hence flexible and highly configurable. The PcFF80 has both analog and digital signal processing (DSP) and full video data logging features. If a GPS signal is available the user can include GPS position and ground speed in the data logs.

General Acoustics GmbH

Hendrik Eden, General Manager
 Dorfstr. 57, Kiel-Ottendorf, Schleswig-Holstein, Germany 24107
 Tel.: +49-431-58081-80; Fax: +49-431-58081-89
 E-mail: JKoslowski@GeneralAcoustics.com
 General Manager: Hendrik Eden
 Sales Manager: Jens Koslowski, Heiko Balzerek, Jorge Echeverri
 Number of Employees: 15

For nearly 10 years General Acoustics has been established in the acoustic measuring market. The company develops, produces and sells its own devices, managing its worldwide activities from headquarters in Kiel, Germany. The staff of General Acoustics consists of specialists in acoustics, electronics, hydrodynamics and geology as well as software engineers. Since its inception General Acoustics has developed many new technologies, e.g. DSLP (Detection of Sediment Layers and Properties) or ultra sounding sensor devices.

Technology Profile

General Acoustics' products include Water Level + Wave measuring Systems, the priced LOG_aLevel (RIZA 05) and the UltraLab systems. Also special echo sounders for the hydrographical-geological operations and Subbottom Profiler are in the product portfolio. GA is the technologic world leading company concerning the exact detection of the fluid/solid interface (precise



The Tide and Wave Station LOG_aLevel winner of Rijkswaterstaats' comparison test 2005.

bathymetry) including of all suspension and sediment layers. The new DSLP Subbottom Profiler is able to penetrate even sand layers without any problem. Also the company offers the software LOG_aFlow which creates real current charts by the use of existing ADCP data. LOG_aFlow is standard in the Port of Rotterdam and Hamburg.

Davidson Laboratory

Contact: Dr. Raju Datla, Research Associate Professor
711 Hudson Street, Stevens Institute of Technology, Hoboken, NJ 07030
Tel: 201-216-5568; Fax: 201-216-8214
E-mail: rdatla@stevens.edu

The Davidson Laboratory combines experimental and numerical methods to solve complex problems related to surface and sub-surface vessel dynamics. The experimental facilities include a high speed towing tank with wave generation capability and a rotating arm tank. The laboratory has tested hydrodynamic scale models of all types of craft (sail boats, yachts, planing craft, sea-planes, submarines, torpedoes) to assess their performance for calm water resistance, propulsion, seakeeping and maneuvering. Numerical modeling using advanced CFD codes is performed and provides an excellent supporting tool to our experimental towing tank.



Deep Development Corp.

Deep Development Corp. - Canada
301-31127 Wheel Ave., Abbotsford, BC V2T 6H1 Canada
Deep Development Corp. - USA
446 Harrison Street, Sumas, WA 98295
Tel: 1-604-864-9671; Fax: 1-604-864-8472
Internet: <http://www.deepdevelopmentcorp.com>
Managing Director: Tim J. MacFarlane
System Specialist: Aimee Byrne
Applications Specialist: Alex Wong

Viperfish MSX (Marine Spec. Xtreme): Designed for top side applications, the Viperfish MSX is a high performance shock and vibration proof digital recorder that converts analog video to digital format. It records high resolution video (720 x 486 pixels), at full-speed 30 frames per second with zero latency.

Viperfish Amphibian: Designed for intense environments, the Viperfish Amphibian is a ruggedized all-weather, digital video recorder. Viperfish Amphibian converts analog signals to digital format and records non-multiplexed video up to 640 x 480 pixels to a high capacity hard drive.

Viperfish Deep: Record high resolution video at depths up to 1,000 feet on a rugged digital platform. Clear, real-time, full-speed, non-multiplexed video is recorded to a rugged hard drive. This battery operated submersible dig-

ital recorder is power self sufficient providing flexibility and reliability for all your underwater recording needs. It converts analog video to digital format storing it at 720 X 480 frames full speed 30 FPS.

To ensure top security of data, tampering, jamming and eavesdropping - Viperfish Amphibian wireless transmission option frequency hops at 110 times per second at a minimum of 6 mega hertz per hop. Data is encrypted with forward error correction. The frequency range is 902 to 928 band (approximately 104 channels). Viperfish high resolution recorders are ideal for marine research or underwater applications.

Deep Sea Systems International,

P.O. Box 622, Falmouth, MA 02541-0622
Tel: 508-564-4200; Fax: 508-564-4500
Email: info@deepseasystems.com
Internet: <http://www.deepseasystems.com>

Deep Sea Systems International (DSSI), located in Cataumet, Mass., was founded by owner and President

Test Plans Begin with Ohmsett

Test with oil, train with oil.

At Ohmsett - The National Oil Spill Response Test Facility, research and development opportunities are unlimited!

Ohmsett's unique capabilities and realistic marine environment play an essential role in the development of new technology and in creating effective oil spill response evaluations.

Features & Testing Capabilities:

- ❖ Independent & objective testing
- ❖ Measurable & repeatable test parameters
- ❖ Full-scale testing, research & training
- ❖ Real oil
- ❖ Dispersant effectiveness
- ❖ Emulsion formation
- ❖ Oil recovery system testing in broken ice
- ❖ Protocol development

Ohmsett Facility

Leonardo, NJ
732-866-7183 or 703-787-1580
www.ohmsett.com

Managed by the U.S. Department of the Interior, Minerals Management Service



Visit www.maritimeequipment.com/mt & Click No. 212

Fugro Pelagos, Inc.

3738 Ruffin Road, San Diego, CA 92123
Tel: 858-292-8922; Fax: 858-292-5308
E-mail: fugropelagos@fugro.com
Internet: www.fugro-pelagos.com
President: Edward Saade
Marketing Director: David Millar
Number of Employees: 8,000 worldwide
Annual Sales: \$1.4 billion

Company Profile

Fugro Pelagos, Inc. (FPI) has been a California corporation since 1977, starting as specialists in seafloor geological studies using marine geophysics, sampling and underwater scientists and engineers.

The firm grew steadily by providing technical services to the offshore industry, U.S. Navy and the engineering community. Growth accelerated during the submarine cable boom of the 1990's. FPI joined Fugro in 2003 and as part of the worldwide Fugro Group, FPI skills are efficiently delivered anywhere.

As part of the Fugro Group, Fugro Pelagos - now with offices in San Diego, California; Anchorage, Alaska; Honolulu, Hawai'i; and Stennis, Miss. - is the primary government services business in North America. It is a premier provider of high-resolution hydrographic and seabed mapping services. While continuing to serve the offshore industry, FPI is now also a major contractor to all levels of government including the National Oceanic and Atmospheric

Administration (NOAA), the U.S. Navy, the U.S. Army Corps of Engineers, the U.S. Geological Survey and National Marine Fisheries Service, and numerous state and local agencies and academia.

Fugro collects and interprets data related to the earth's surface and the soils and rocks beneath. It provides advice based on the results, generally for purposes related to the oil and gas industry, mining and the construction of buildings or civil engineering structures. Fugro operates around the world at sea, on land and from the air, using professional, highly specialized staff and advanced technologies, data gathering equipment and systems many of which have been developed in-house.

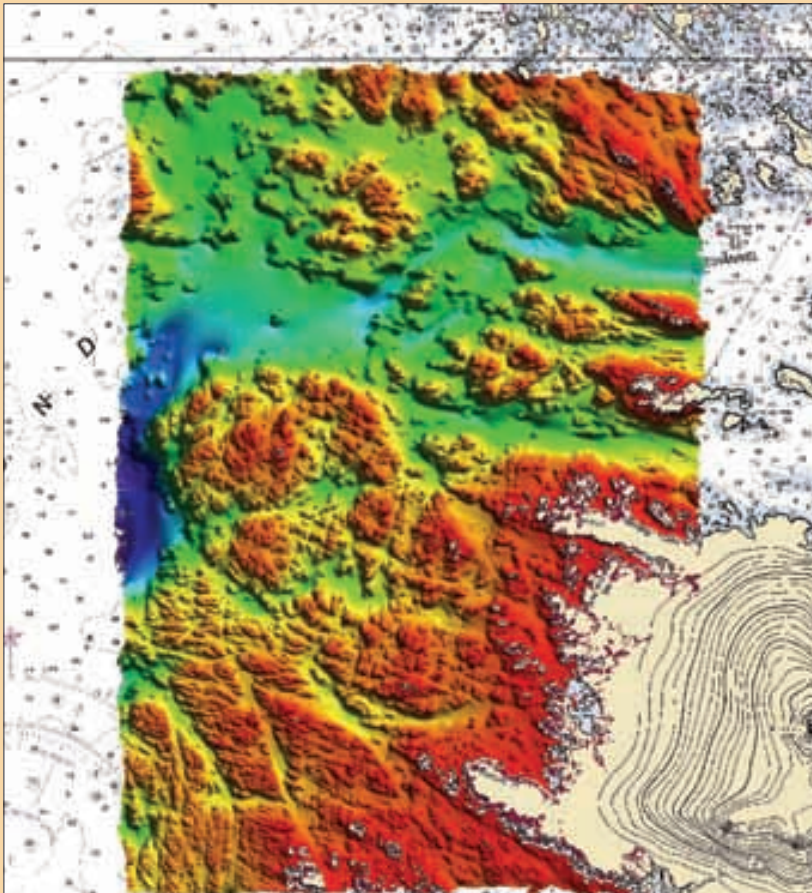


Edward Saade, president

Technology Profile

Fugro Pelagos, Inc. (FPI) is renowned for its high-resolution seafloor and coastal mapping products. FPI's technical services are provided on a global basis and integrate both offshore and airborne surveying technologies. Geological and seafloor habitat maps, pipeline and cable routing, and geohazard and engineering charting are all delivered to meet or exceed international standards.

Fugro Pelagos is a premier provider of high-resolution hydrographic and seabed mapping services to address engineering, environmental and resource management issues. Fugro Pelagos integrates advanced technologies such as multibeam bathymetry, multibeam backscatter "snippets" imagery, Airborne LiDAR bathymetry and GIS to provide customers with innovative solutions that have redefined the manner and quality in which the seafloor can now be mapped and displayed. Using the latest generation Airborne LiDAR bathymetry system available today, the company is also able to acquire and integrate topographic elevations, bathymetric soundings and digital aerial photography in coastal zone and riverine mapping environments. Fugro Pelagos continues to invest research and development effort in the area of multibeam bathymetry and multibeam acoustic imagery. The company is pushing the envelope in the area of seabed mapping and has become recognized as one of the leading seabed mapping firms in the world. The in-house software development group of Fugro Pelagos supports both internal users and the company's extensive external customer base. With marine survey and GIS expertise, its software engineers develop commercial applications and provide customized solutions. Fugro also offers AUV platforms for multibeam surveying, which can cover deepwater operating areas with very high-resolution seafloor data.



LiDAR-MB combined with chart.

Chris Nicholson in January 1983. The company's initial development was the Mini Rover, a low cost remotely operated vehicle. DSSI has since gone on to develop the Mini Rover MK-2, the Sea Rover, and our current MAX Rover MK-1, MK-2 and MK-3 series of vehicles for operation to 6,000 meters, with a full set of accessories. Ten MAX Rovers have been built. The company's newest design is the Mini MAX Rover. The Mini MAX is a scaled down version of the MAX Rover, using the same reliable construction. It is offered as an economical, basic function ROV suitable for the most rugged work environments. Special projects have

included: technical support for the filming of *Titanica*, Stephen Low's IMAX 70 mm big-screen production of the famous shipwreck; the National Parks Service and National Geographic Pearl Harbor Project, using a DSSI Mini Rover MK-2 to survey the sunken battleship Arizona and search for a Japanese minibus sunk during the attack Pearl Harbor.

Deep Ocean Engineering

Contact: Michael Gilson, Vice President
 1431 Doolittle Drive, San Leandro, CA 94577
 Tel: 510-562-9300; Fax: 510-430-8249
 E-mail: mgilson@deepocean.com
 CEO: Blaise Fetting
 President: Joe Itchon
 Vice President: Michael Gilson
 Annual Sales: \$3 million+
(See Profile on page 24)

DeepSea Power & Light

Contact: Brad Fisher
 4819 Ronson Ct., San Diego, Ca. 92111
 Tel. 858-576-1261 • Fax. 858-576-0219
 Email: sales@deepsea.com
 Internet: www.deepsea.com
(See Profile on page 24)

EdgeTech Marine

Contact: Simon Reeves, Business Development Manager
 P.O. Box 850, 4 Little Brook Road,
 West Wareham, MA 02576
 Tel: 508-291-0057; Fax: 508-291-2491
 E-mail: info@EdgeTech.com

EdgeTech established itself as a private company in 1995 after being part of EG&G since 1965. It selected its name in part to honor the late Dr. Edgerton, an MIT professor and marine instrumentation pioneer. EdgeTech develops and produces a

Temperature & Depth


RBR pays particular attention to accuracy, calibrating to the highest possible standards. Backed by an industry-leading lifetime warranty, the TDR-2050 from RBR is the best temperature and depth recorder available.

Model TDR-2050

Accuracy	T: $\pm 0.002^{\circ}\text{C}$ D: $\pm 0.05\%$ FS
Resolution	T: 0.00005 $^{\circ}\text{C}$ D: 0.001% FS
Calibration	NIST traceable
Drift	T: $< 0.002^{\circ}\text{C}/\text{year}$
Memory	8MB (now standard)
Depth Rating	740m (plastic) 6,600m (titanium)

- 2,400,000 samples on one set of batteries
- Stable clock < 3 seconds/month
- Optional < 95 millisecond temperature response
- Optional Realtime communications
- Fast data retrieval $> 100,000$ samples/minute
- Easy-to-use Windows Software

www.rbr-global.com



RBR Precision Instruments for over 25 years
 Ottawa, Canada (613) 233-1621

Visit www.maritimeequipment.com/mt & Click No. 213

Super SeaArc™ 150W HID

COMPANY: **DEESEA POWER & LIGHT**
www.deepsea.com

RELEASE DATE: 03/01/06

NOTES: **NEW!**



ITEM NO.	QTY	DESCRIPTION
1	1	150W HID 4200°K LAMP
2	1	UNIVERSAL POWER INPUT 120-277V, AC/DC
3	1	INTEGRATED BALLAST
4	1	4000m & 6000m RATED VERSIONS

TOLERANCES

Engineered to Exceed Industry Standards

Visit www.maritimeequipment.com/mt & Click No. 203



Edge Tech's latest technology - Buried Object Scanning Sonar (BOSS) System - which is currently under development with Florida Atlantic University for the U.S. Navy.

tutional and military customers on an international basis and is considered a leader in its field. EdgeTech Marine employs over 50 people and currently operates out of two facilities within the U.S.; in Massachusetts and Florida.

Technology Profile

EdgeTech develops a variety of high end marine products by utilizing and enhancing a set of core technologies, which includes, but is not limited to, Full Spectrum Chirp Processing, MultiPulse Technology, Dynamically Focused Arrays, Synthetic Aperture Sonar (SAS), Bathymetry, Telemetry,

Modular Design, Compact & Low Power Electronics and Application Customization. Most recently EdgeTech has used this technology set to introduce a new high frequency 300/600 kHz option for its 4200-FS Dual Mode Side Scan Sonar System and portable topside processors for many of their systems to allow for more versatility and use in smaller ships or when portability is required. In addition to EdgeTech's standard system offerings, they also develop specialized systems for users based upon their special applications and requirements. Some recent examples of such systems are a Wideband Acoustic Mapping System (WAMS) designed for Woods Hole Oceanographic Institution (WHOI),

variety of standard and specialized marine products and systems including side scan sonar, sub-bottom profiling and combined, integrated and modular imaging systems for deep towed, AUV, ROV and other applications. It sells and supports its products and systems to commercial, insti-

Gregg Drilling & Testing, Inc.

2726 Walnut Avenue, Signal Hill, CA 90755

Tel: 562-427-6899; Fax: 562-427-3314

E-mail: info@greggdrilling.com

Internet: www.greggdrilling.com

President: John M. Gregg

Vice President: Patrick Keating

Director of Marketing and Business Development: Tim Boyd

Gregg Drilling & Testing, Inc. and Gregg In Situ, Inc. offers a wide range of environmental drilling, geotechnical drilling and cone penetration testing (CPT) services for site investigation and remediation. On or off-shore, our experienced personnel and extensive resources allow us to solve the most complex technical problems and save time and money, without sacrificing quality.

Services Include: Offshore drilling using jack-up boats, barges or Gregg's drill boat (the Quin Delta)/ Sediment/soil sampling and continuous coring/ Cone penetration testing (CPT) services/ Offshore foundation and liquefaction services/Vibracore

Gregg Marine Services offers offshore drilling, sediment sampling, and cone penetration testing (CPT) services.

The drill ship Quin Delta is a self-propelled ocean going vessel with a draft of only three ft. This allows for offshore drilling in a wide range of locations, from deep waters, to harbors, rivers and shallow inland locations. The Quin Delta is equipped with 80-ft. spuds which can be used for stable anchoring in waters up to 70-ft. deep.

The Quin Delta is ideally suited for offshore foundation and liquefaction studies, soil sampling and coring, and for establishing baseline conditions and material quantities for dredging programs.

CPT soundings can be completed using either a conventional CPT system deployed by the B-80 or with our specially designed "minicone" system. The minicone system is a miniaturized CPT system that utilizes a coilable cone rod and thruster unit mounted in a cage that is lowered to the seafloor.

The minicone is attached to a shipboard data acquisition system and results can be viewed in real-time during the sounding. The minicone system allows for rapid deployment and completion of CPT soundings in water as deep as 5,000-ft.

Gregg also operates vibra-core and gravity core sampling systems that can be used to collect near surface soil cores.

The vibra-core system can be used to collect core samples to depths up to 20 ft. The gravity core system is useful for quickly sampling soils to a depth of 5 ft. For deeper coring, Gregg uses an OW coring system. The OW system is capable of obtaining 2 in. cores and 3 in. Shelby tube or 3 in. split spoon samples.

Government of Newfoundland & Labrador

Newfoundland and Labrador Ocean Technology Infrastructure

Newfoundland and Labrador has considerable infrastructure which support many development activities within the marine technology community. Key components are described below.

Memorial University of Newfoundland (MUN)/ Marine Institute

Memorial University, based in St. John's, is heavily involved in the marine technology sector through education and research programs. Many of the people within the sector in the Province are graduates or ex-faculty members of MUN - mostly from the science and engineering faculties. It also has a number of institutes, research facilities and Centers which undertake a range of work in various aspects of the marine technology sector. (www.mun.ca/ and www.mi.mun.ca)

Ocean Sciences Center (OSC)

(www.osc.mun.ca) is a leading Canadian cold ocean research facility at Logy Bay near St. John's focusing on research into biological, chemical and physical oceanography; acoustic and satellite remote sensing; primary and secondary biological production; toxic phytoplankton blooms; marine finfish and shellfish aquaculture; dynamics of the Northern Cod stock; and seabird and marine mammal behaviour.

Bonne Bay Marine Station

(www.bonnebay.mun.ca) the Bonne Bay Marine Station on Newfoundland's west coast is dedicated to expanding knowledge of marine ecology and offers oceanographers, biologists and other scientists with a world-class facility for marine ecosystem research.

Canadian Center for Fisheries Innovation (CCFI)

(www.ccfi.ca) undertakes scientific research and development activities in aquaculture, harvesting, and processing on behalf of the fishing industry with the aim of increasing and enhancing clients' productivity, profitability, and safety.

Center for Aquaculture and Seafood Development (C-ASD)

(www.mi.mun.ca/casd) C-ASD has built a high level of applied scientific

and technical expertise to enhance the competitiveness of the aquaculture and seafood processing sector. C-ASD services a full range of industrial clients, from owner/operator start-up companies, to large, national corporations in the areas of applied research, product and process development, technology transfer and advisory services, and support for education and training.

Center for Sustainable Aquatic Resources (C-SAR)

(www.mi.mun.ca/csar) addresses the specific needs of fishers and fishing gear manufacturers by undertaking industrial research and development and technology transfer in support of selectivity and conservation.

Center for Marine Simulation (CMS)

(www.mi.mun.ca/mi/cms) provides a broad range of simulation-based training and applied research services in ship navigation, marine engineering and ship communications which contribute significantly to the efficiency and safety of marine operations and to environmental protection.

Offshore Safety and Survival Center (OSSC)

(www.mi.mun.ca/osscc) is actively involved in efforts to expand the knowledge base and improve technology associated with offshore safety and survival and emergency response. Facilities include a simulated ship structure, a fire field, a survival tank for instruction in emergency rescue from ships, oil rigs, and helicopters, and lifeboat/rescue capsules, fast rescue crafts, and a sea going vessel.

Center for Cold Ocean Resources Engineering C-CORE

(www.c-core.ca) C-CORE is an international research and development corporation providing innovative engineering solutions in the fields of intelligent systems, remote sensing, ice engineering, and geotechnical engineering to clients in the natural resource sectors. Originally established to support offshore development along Canada's East Coast and in the Arctic by focusing on issues related to cold oceans environments, C-CORE's expanded client base encompasses oil and gas, pipelines, mining, pulp and paper, forestry, fisheries and aquaculture.

NRC Institute for Ocean Technology

<http://iot-ito.nrc-cnrc.gc.ca/> The Institute for Ocean Technology (IOT) is a world class research and development institute within the National Research Council focused on the design and behaviour of vessels, offshore structures, and other marine systems. It encompasses several state of the art facilities and expertise for testing physical models including an ice tank, a towing tank, and an offshore basin as well as strong in-house numerical modelling capacity.

Northwest Atlantic Fisheries Center (NAFC)

(www.aquatic.uoguelph.ca/Human/Research/Webresearchinst/East/NorthwestAFC/nafc.htm) The Northwest Atlantic Fisheries Center located in St. John's is the Newfoundland regional headquarters of DFO. The Science, Oceans and Environment (SOE) Branch within NAFC is focused on research relating to aquatic resources, marine environment and habitat management, oceans programs, and hydrography. NAFC encompasses marine and fresh-water aquaria, a stream tank, toxicity laboratories, wet labs, and other specialized facilities, including a high capacity open seawater system.

Supporting Organizations Oceans Advance

(www.oceansadvance.net) is part of an initiative funded by NRC to establish an internationally competitive oceans technology innovation cluster in St. John's.

Other Resources include:

Canadian Center for Marine Communications (CCMC)

(www.ccmc.nf.ca)

Genesis Group

(www.genesis.mun.ca)

Newfoundland Association of Technology Industries (NATI)

(www.nati.net)

Newfoundland Ocean Industries Association (NOIA)

(www.noianet.com)

City of St. John's Center of Ocean Excellence

(www.stjohns.ca/business/oceanexcellence/index.jsp)



NEWFOUNDLAND & LABRADOR, CANADA

OCEAN TECHNOLOGY SECTOR

Newfoundland and Labrador Ocean Technology Sector

A vast, resource-rich expanse of ocean has shaped the history, culture and economy of the province of Newfoundland and Labrador for centuries. That undeniable attachment to the sea, combined with the steadfast determination and creativity of its people, has placed Newfoundland and Labrador at the forefront of Canada's ocean technology industry. From offshore systems evaluation to underwater acoustics and integrated marine navigation, the province's ocean technology enterprises are achieving worldwide prominence.



Industry Profile

Newfoundland and Labrador is home to approximately 45 knowledge-intensive, small and medium-sized enterprises developing innovative ocean technology products and services for niche markets in Canada, the United States, Europe, Central and South America and Asia. These companies employ approximately 1,000 workers and generate total estimated revenues in the order of C\$250 million.

Provincial Profile

- **Most Easterly Province in Canada**
- **Time Zone: EST + 1.5 hrs**
- **Population: 515,961 (2005)**
- **Capital City: St. John's Population: 182,485 (2005)**
- **Total Coastline: 17,542 kms**
- **Gross Domestic Product (2005): C\$22.3 Billion**
- **Estimated GDP Growth 2006: 6.2%** (highest of all Canadian provinces)



Ocean Technology Expertise in Newfoundland and Labrador

Ocean ICT and Marine Operations:

- *Instrumentation / communication*
- *Underwater acoustic technologies*
- *Ocean mapping / sonar technologies*
- *Remote sensing / radar technologies*
- *Electronic charting, integrated marine navigation and course prediction systems*
- *Wireless biotelemetry species monitoring systems*
- *Marine geomatics*
- *Ship voyage data recorder technology*
- *ROV technology, underwater robotic control*

Ocean Technology Development and Marine Services:

- *Numerical and physical modeling and testing*
- *Boatbuilding, fabrication and repair*
- *Fishing vessel design*
- *Geotechnical services, marine weather and sea state forecasting*
- *Marine transportation, port operations and cargo handling*
- *Security technologies and ocean surveillance*
- *Renewable ocean energy systems*
- *Escape, evacuation, survival, safety and rescue solutions*

Clusters of Expertise, Partnership and Collaboration

St. John's, the capital city of Newfoundland and Labrador, boasts a mature and comprehensive concentration of marine technology research and development performers and companies. Much of the capacity is co-located within just a few city blocks, forming a unique environment conducive to intellectual and entrepreneurial interaction. This clustering of small and medium-sized enterprises, research facilities, educational institutions, municipal, provincial and federal infrastructure and related personnel has created tremendous synergy and encouraged a culture of collaboration.

Our world-class research and development infrastructure has created a cluster of ocean excellence. In fact, a key ingredient of our success is a unique partnership of companies, institutions and government agencies called Oceans Advance. This multi-stakeholder innovation cluster initiative facilitates world-class capability and aims to make the St. John's region an international location of choice for ocean technology.

Infrastructure, Research and Development

The Centres of Excellence, a term used to describe Newfoundland and Labrador's key ocean technology research and development facilities, serve as a backbone of the ocean technology community. These Centres, all located near or within Memorial University of Newfoundland, provide fundamental research, technology development expertise, industry incubation, testing, training and scientific validation services.

Facilities such as the National Research Council-Institute for Ocean Technology evaluate the design of vessels and offshore structures in its ice tank, towing tank and offshore engineering basin. Memorial University's Ocean Sciences Centre is a leading Canadian cold oceans research facility.



That's just the tip of the iceberg, so to speak. Many of these facilities are one of a kind and cater to an international clientele that includes port authorities, fisheries departments, coastguards, and academic institutions. In fact, we have all the unique ingredients of history, culture, economics and resources that few other places in the world can bring together in one marine and ocean technology focused location.

Newfoundland and Labrador has positioned itself as a high quality, innovative, and reliable supplier of specialized marine and ocean technology products and services to national and global markets. Our interest for the future is not only developing new technologies but to develop and provide integrated management solutions for the pursuit of the environment, resource extraction and resource management.

Canadian Centre for Fisheries Innovation _____ www.ccfi.ca

Canadian Centre for Marine Communications _____ www.ccmc.nf.ca

C-CORE _____ www.c-core.ca

Faculty of Engineering & Applied Science – MUN _____ www.engr.mun.ca

Marine Institute – MUN _____ www.mi.mun.ca

Offshore Safety and Survival Centre _____ www.mi.mun.ca/osscc

Centre for Marine Simulation _____ www.mi.mun.ca/cms

Centre for Aquaculture and Seafood

Development _____ www.mi.mun.ca/casfd

MI International _____ www.mi.mun.ca/mi_international

Centre for Sustainable and Aquatic Resources _____ www.mi.mun.ca/csar

National Research Council Canada –

Institute for Ocean Technology _____ www.iot-ito.nrc-cnrc.gc.ca

Ocean Sciences Centre – MUN _____ www.osc.mun.ca

For further information about the ocean technology sector in Newfoundland and Labrador contact:

Innovation, Research and Advanced Technologies Branch
Department of Innovation, Trade and Rural Development
Government of Newfoundland and Labrador
P.O. Box 8700, St. John's, NL A1B 4J6
Tel: (709)729-7000 Fax: (709)729-5936
<http://www.gov.nl.ca/intrd> <http://www.nlbusiness.ca>



a Dynamically Focused Side Scan System for C&C Technologies' Hugin AUV, a Buried Object Scanning Sonar (BOSS) System in conjunction with Florida Atlantic University for the U.S. Navy, a combined Side Scan/Sub-Bottom System for SeaRobotics' USV-2600 Unmanned Surface Vehicle, and a side scan sonar system outfitted onto a U.S. Navy submarine for ice keel mapping.

ESRI (Environmental Systems Research Insitute)

380 New York St., Redlands, CA 92373-8100
Tel: 909-798-1260 1-2641; Fax: 909-307-3051
E-mail: hshields@esri.com
Internet: www.esri.com
President: Jack Dangermond
Vice President: Laura Dangermond
Marketing Director: Linda Hecht
Annual Sales (US\$): \$610 million

With annual sales of more than \$600 million and offices in more than 80 countries, ESRI has been a leader in the geographic information system (GIS) software industry for more than 35 years.

ESRI offers innovative mapping technology solutions for a multitude of industries including maritime, from oceanography to hydrography, navigation to exploration, and from coastal shoreline to the bathymetric bottom. ESRI's software has been

ESRI has developed a nautical Production Line Tool Set, called PLTS for ArcGIS-Nautical Solution, which is used to perform high volume production and maintenance of standard digital nautical chart databases from a variety of sources. The solution includes desktop production tools to efficiently create and maintain National Geospatial-Intelligence Agency Vector Product Format (VPF) and Digital Nautical Chart (DNC) compliant data as well as the Harbor Approach and Coastal chart cartographic product. This solution will soon include the capability to create Electronic Navigational Charts using the S-57 specifications from the International Hydrographic Office.

adapted and used to assist organizations worldwide to achieve their goals.

Hydrographic mapping services use GIS for complex projects such as charting seafloor topography.

ESRI has developed GIS software for mapping, charting and 3D visualization that allows for spatial analysis, modeling and ocean management. ESRI's ArcGiOS software is capable of processing many types of data to create a wide range of representations.

Working with professionals in oceans, shoreline, and waterways industries, ESRI has joined in the development of data models for marine objects and phenomena data. The ArcGIS marine Data Model represents a new approach to spatial modeling that promotes better integration of natural and manmade ocean features.

Farsounder

95 Hathaway Center, Suite 5 - Providence, RI 02907
Tel: 401-784-6700; Fax: 401-78-6708
E-mail: info@farsounder.com
Internet: www.farsounder.com

FarSounder looks ahead and displays the seafloor and in-water obstacles in three dimensions. The entire 3-D image is created with a single ping, and is updated every 2 seconds. Know the range, bearing and depth of all the obstacles ahead and to the side.

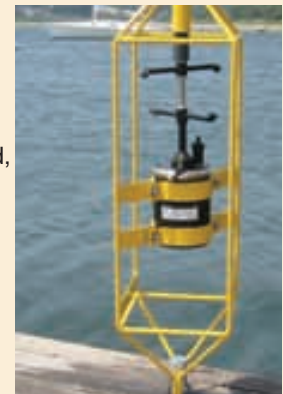
Technology Profile

The FS-3 is its flagship product, a 3D forward looking sonar designed as a surface ship navigation device capable of detecting whales, shipping containers, and other obstacles. The FS-3 is capable of generating a 3D depth map over its entire field-of-view with a single ping. The FS-3 operates at 60 kHz and has an accuracy of about 1.6 degrees. The FS-3 DT is one of FarSounder's newest product which uses Dual Transmission technology. Like the FS-3, it provides a 90 degree field-of-view depth map with a single ping. However, the FS-3 DT also includes a narrow beam 1/4 range mode. This Dual Transmission design can be configured to automatically switch between the standard 90 degree ping and the long range narrow beam ping.

Falmouth Scientific, Inc.

Contact: Frances Lewis-Souza, Marketing Manager
1400 Route 28A, PO Box 315, Cataumet MA 02534 • Tel: 508-564-7640; Fax: 508-564-7643 * E-mail: flewis@falmouth.com
CEO: John Baker • Vice President: Rick Babicz • Sales Manager: Jeff Bartkowski
Number of Employees: 28

Since 1989, Falmouth Scientific, Inc. has been a leader in the development and manufacturing of precision oceanographic instrumentation. FSI's full range of products is used around the world, in environments ranging from estuarine to full ocean depths. Core products include current meters, CTDs, profiling CTDs, wave gauges, AUVs and other oceanographic sensors. FSI also offers offshore acoustic instrumentation and leading edge special engineering capabilities to address a wide array of underwater applications.



The 2D ACM current meter in a 5 ton mooring cage.

Hafmynd - Gavia Ltd

Fiskistod 73, 101 Reykjavik, Iceland
Tel: +354 5112990; Fax: +354 5112999
E-mail: sales@gavia.is
Internet: www.gavia.is

Hafmynd Ltd. was formed in 1999 as a privately owned company specializing in the commercial development, manufacturing, and marketing of the Gavia AUV. Hafmynd's roots date back to 1996 when the development of the Gavia AUV began. The first Gavia prototype made its maiden voyage in 1997 and was used extensively for testing and development until the year 2000. In 2001 the first production Gavia was built and sold to the Marine Research Institute with vehicle following to the University of Iceland. Towards the end of 2003 the second generation Gavia was introduced. Building on the experience of the first generation vehicles, the second generation vehicles offers several important improvements such as the fully modular design, allowing for user reconfiguration of the vehicle, rapid change out of battery modules and simplified maintenance and reduced maintenance costs. The first three deliveries of the second generation Gavia began in 2005 to the Canadian Research Council as a dual use oceanographic research/ testbed vehicle followed by deliveries to the United States Navy for MCM applications and to the University of British Columbia and the for oceanographic research. Hafmynd Ltd. is the sole owner of the Gavia design and IP rights. Hafmynd controls the development, production and marketing of the Gavia system, which

enables the company to act rapidly to market trends and customer requirements. New sensors and devices can thus be integrated in the shortest possible time.

Technology Profile

The GAVIA AUV System developed by Hafmynd LTD, is a commercially available fully modular compact AUV capable of both very shallow water and deep-water operations. The Gavia base vehicle is a mobile sensor platform that can be user onfigured on deck for a particular task or operating condition by the addition of one or more sensor, navigation or battery modules, which are inserted into the vehicle and locked in place by means of a unique twist lock system.

The modularity of the Gavia allows the option of a single vehicle to be utilized for more then one use and for joint ownership by more than one institution such as the Gavia that was delivered to the Canadian Research Council, which purchased a Gavia as an engineering test bed vehicle and as an oceanographic research platform. Gavia's modularity allows for varied configurations of vehicles to be utilized in applications from mine hunting to oceanography and commercial survey applications.

In summer 2006 the GeoSwath swath bathymetry sonar from GeoAcoustics will become available for the Gavia, allowing full IHO standard bathymetry to be gathered from a small AUV. This will make the Gavia an ideal tool for surveyors to use from vessels of opportunity or from the shore.



France Telecom Mobile Satellite Communications

16 boulevard du Mont d'Est, Noisy Le Grand, France 93161

Tel: +33 5 56 22 32 31

E-mail: mobilesat@francetelecom.com

CEO: Erik Ceuppens

Marketing Director: Ghani Behloul

Number of Employees: 250

Annual Sales: \$200 million

France Telecom Mobile Satellite Communications provides a wide range of mobile satellite services to private and professional customers in areas devoid of traditional fixed or mobile communications networks.

France Telecom Mobile Satellite Communications offers the services of all major satellite providers including Inmarsat, Iridium, Thuraya. In April 2006 it signed its latest partnership with Connexion by Boeing to

distribute its global, high-speed Internet system. Through data rates of up to 256 kbps from the vessel to the satellite and data rates up to 5 mbps from the satellite to the vessel, the service enables multiple, simultaneous maritime users to access the Internet, corporate intranet, and e-mail.

Fugro Global Environmental & Ocean Sciences

PO Box 740010, 6100 Hillcroft (77081),

Houston, Texas 77274

Tel: 713 346 3600; Fax: 713-346-3605

E-mail: usa@geos.com

Managing Director: Jeff Coutts

Directors: Jan van Smirren, Garry Mardell, Mark

Calverley, Mark Wimshurst

Number of Employees (worldwide): 200

Fugro Global Environmental & Ocean Sciences (GEOS) is a supplier

of meteorological and oceanographic (metocean) services for offshore and coastal engineering applications. With more than 30 years experience in a diversity of projects worldwide, the company is well placed to respond to the metocean measurement and consultancy needs. The company offers metocean solutions globally. The claims the largest commercially available inventory of metocean measurement equipment.

Technology Profile

- Monitoring services including the design and development of systems to monitor metocean conditions in real-time, installation and testing of systems (meteorological

MacArtney

G1. Guldagervej 48, DK-6710 Esbjerg V, Denmark

Tel.: +45 7613 2000; Fax: +45 7511 7220

E-mail: mac-dk@macartney.com

Internet: <http://www.macartney.com/>

Company Profile

The MacArtney Group supplies products and engineering solutions to the worldwide Underwater Technology Market. Its aspiration is to maintain our continued success by using experience and understanding of customers' expectation.

The MacArtney Group has established a network of companies in strategic locations around the globe. The Headquarter of the Group is located in Esbjerg on the West Coast of Denmark - home to MacArtney A/S since it started in 1978, and still the main hub, providing logistical, technical, financial and marketing support to all of the companies within the Group. Apart from its own products, MacArtney also represent some of the most advanced, competent and reliable manufacturers' products in the Underwater Technology Industry.

The MacArtney Underwater Technology Group was incorporated in Denmark in 1978 and today services the international underwater markets through daughter companies in strategic worldwide locations.

• Cable Terminations

One of the most vulnerable components of any underwater system is the connection between a cable and an instrument. MacArtney specializes in all types of cable terminations and cable protection and maintain in-house facilities for effectively testing designs and finished products. These range from simple over moldings to complex electrical, optical and mechanical terminations. Additional prod-

ucts include bend restrictors, protection armor rods and special towing arrangements.

• Fiber Optic Systems

New technology in fiber optics and the demand for more data and longer cables drove a demand for package solutions to cope with the harsh conditions experienced in deep water operations. MacArtney has been working on such systems for a number of years and can offer components or complete systems. These include expanded beam connectors, penetrators, dynamic cables, optical/electrical slip rings and telemetry systems capable of transmitting large amounts of data over long distances.

• System Integration

System integration is an important part of the MacArtney service. Compatibility and installation of system components are paramount if a reliable working product is to be deliveries. Processes include complete handling systems where a terminated cable is tension spooled on a winch and connected through slip rings and junction boxes; complete ROV and ROTV systems can be retro fitted and rebuilt giving the customer the opportunity to work through one responsible supplier.

• Stocking and Leasing

The MacArtney Group holds large stocks of Subconn underwater connectors, standard cables and spare parts to meet urgent requirements. In addition the company has an extensive lease pool in Norway, primarily cameras and sonars, which is available to the rest of the group. In many cases we can support a customer, at very short notice, with a replacement product while the original is being repaired or refurbished.

Hydroid, LLC

6 Benjamin Nye Circle, Pocasset, MA, 02559 USA
Tel: 508-563-6565; Fax: 508-563-3445
E-mail: lbandstra@hydroidinc.com
President: Christopher von Alt
Vice President of Marketing: Kevin McCarthy
Number of Employees: 20

Company Profile

Hydroid, LLC was founded in November 2001, following the execution of a technology transfer license with the Woods Hole Oceanographic Institution (WHOI). The intent of the license was to transfer the REMUS Autonomous Underwater Vehicle (AUV) technology out of the academic development environment and into the commercial marketplace, making the technology available to a wide array of users.

This transition has proven to be a remarkable success. Over the past several years, Hydroid has taken the REMUS product and technology to a new level, providing world-class sales, service and support to an ever-increasing customer base. There are approximately 100 REMUS vehicles in operation around the globe, serving customers within the military, scientific, and commercial market segments.

Hydroid maintains a full service production and test facili-



Remus 600.



Remus 100 in water.

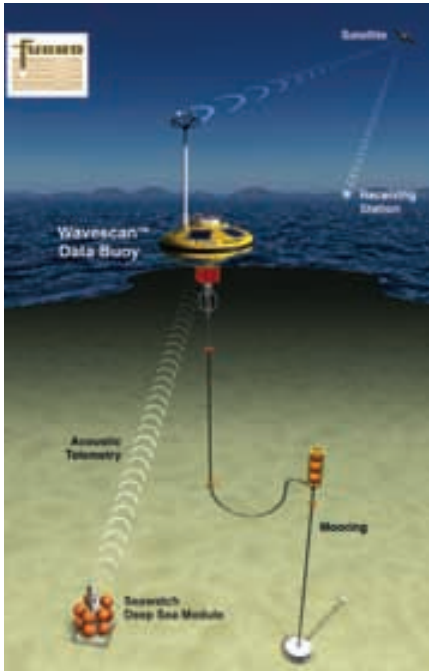
ty, staffed by a skilled and experienced group of individuals committed to the customers' ultimate success. All products are designed and built to meet a rigorous quality standard, and all products are fully documented and designed for large production runs, thus ensuring a repeatable, high quality product.

Hydroid also offers customers a comprehensive, easy to follow training seminar, which ensures that users gain a full understanding of their REMUS vehicle's capabilities, data collection and analysis, and service requirements. Hydroid's customer service department is well-versed and readily available to assist customers in all aspects of operation throughout the life of the vehicle.

Technology Profile

From the coastline to the deepest corners of the ocean, Hydroid now offers a family of AUVs to meet a full range of autonomous needs.

- **REMUS 100:** The REMUS 100 is a powerful, light-weight, compact AUV designed for operation in coastal environments up to 100 meters in depth. The REMUS 100 can be configured to include a wide variety of standard and/or customer specified sensors and system options to meet your unique autonomous mission requirements. The vehicle has been used extensively for a wide array of hydrographic and environmental monitoring applications.
- **REMUS 600:** The REMUS 600 is a highly versatile, modular AUV used for the collection of oceanographic data in water depths up to 600 meters, and can also be configured for 1500 or 3000 meter operations. The vehicle was designed to provide extended mission endurance, increased payload capacity, and greater operating depth.
- **REMUS 6000:** The REMUS 6000 is capable of highly intricate deep-water operations in water depths up to 6000 meters, allowing for a wide spectrum of autonomous operations. The vehicle can be configured to operate at depths of 4,000 m.



and CCTV), training of client personnel, maintenance of proprietary systems (e.g. current speed, wind speed and direction) and remote and direct management of system data;

- Measurement services - measurement of metocean parameters such as waves, current speed; including multi-disciplinary project management, daily monthly, and yearly data acquisition pro-

grams, data analysis and presentation;

- Forecasting services including the provision of site-specific weather forecasts (by email, fax, Inmarsat and the world-wide web), 24-hour telephone consultation and provision of onboard forecasters for sensitive operations offshore;
- Software - the development of software for oceanographic and meteorological data applications;
- Seawatch - design and development of integrated real-time marine monitoring buoy network systems, oceanographic and water quality sensors, and tsunami module for tsunami wave detection;
- Structural Monitoring - specialized engineering related to offshore structures, riser technology and supporting services, including installation and servicing of integrated metocean and structural monitoring systems.



Jeff Coutts,
Managing Director

Fugro Pelagos, Inc.

3738 Ruffin Road, San Diego, CA 92123
Tel: 858-292-8922; Fax: 858-292-5308
E-mail: fugropelagos@fugro.com
Internet: www.fugro-pelagos.com
President: Edward Saade
Marketing Director: David Millar
Number of Employees: 8,000 worldwide
Annual Sales: \$1.4 billion

(See Profile on page 28)

General Acoustics GmbH

Hendrik Eden, General Manager
Dorfstr. 57, Kiel-Ottendorf,
Schleswig-Holstein, Germany 24107
Tel.: +49-431-58081-80; Fax: +49-431-58081-89
E-mail: JKoslowski@GeneralAcoustics.com
General Manager: Hendrik Eden
Sales Manager: Jens Koslowski, Heiko Balzerek, Jorge Echeverri
Number of Employees: 15

(See Profile on page 26)

Falmouth Scientific, Inc.

Contact: Frances Lewis-Souza, Marketing Manager
1400 Route 28A, PO Box 315, Cataumet MA 02534
Tel: 508-564-7640; Fax: 508-564-7643
E-mail: flewis@falmouth.com
CEO: John Baker • Vice President: Rick Babicz
Sales Manager: Jeff Bartkowski
Number of Employees: 28

(See Profile on page 34)

Geonav Marine Systems

11211 Katy Freeway, Suite 430, Houston, TX 77079
Tel: 713-722-9697
E-mail: morton@geonav.com
CEO: Russell Morton

Kongsberg Mesotech

1598 Kebet Way
Port Coquitlam, B.C.
V3C 5M5 CANADA
Tel: (604) 464-8144
Fax: (604) 941-5423
Email: km.sales.vancouver@kongsberg.com
www.kongsberg-mesotech.com

Company Profile

Kongsberg Mesotech Ltd. was formed in 1973 to design and manufacture underwater acoustic equipment. The company offers a range of products for military, fisheries, oil-field, scientific, and other offshore market applications. Kongsberg Mesotech's ongoing research and development has paved the company's presence as a leader in high-resolution sonar systems, and acoustic technology. As a member of the Kongsberg Group of Norway since 1996,

the company has furthered its international market exposure while maintaining the flexibility of a smaller organization. Kongsberg Mesotech's Vancouver office is responsible for the design, manufacture and sales of underwater acoustic products, including: imaging and profiling mechanically scanned sonars, multibeam imaging sonars, multibeam echo sounders, altimeters.

Technical Profile

Kongsberg Mesotech manufactures more than 100 models of multibeam, scanning, side scan, echo sounder, and altimeter sonar combinations. The company's major breakthrough came in 1982 with the development of the Model 971 Scanning Sonar. This high resolution scanning sonar was accepted by military and offshore oilfield market users, and soon became a standard for all ROV operations. To date, over 2500 scanning sonar systems have been delivered.

IXSEA

55 Avenue Auguste Renoir, Marly le Roi, France 78160
Tel: +33 (0) 1 30 08 98 88; Fax: +33 (0) 1 30 08 88 01
E-mail: info@ixsea.com
CEO: Thierry Gaiffe
Marketing Director: Arnaud Quelquejay
Sales Director: Eric Richaud

Company Profile

IXSEA combines smart technology and experience to provide systems and solutions for the scientific, offshore and defense markets in: Navigation and positioning; Imagery; Moorings; Survey; and Space.

In 2006, IXSEA has three industrial sites in France as well as a global sales network in Europe, America and Asia. IXSEA currently employs 180 people, with more than fifty PHD graduates and engineers concentrating solely on research and development. Pioneers of cutting edge technology, IXSEA strives to invent cost-effective, time-efficient, reliable and user-friendly systems and solutions. IXSEA offers a broad and unique range of complementary systems and solutions built on key technologies:

- FOG (Fiber Optic Gyroscope) technology
- Underwater acoustics
- Seismic, sonar and magnetometer imagery solutions

Technology Profile

IXSEA's seismic, sonar and magnetometer imagery solutions integrate hardware with interpretation tools. SHADOWS, the latest system, is the first commercially available off-the-shelf Synthetic Aperture Sonar (SAS). It is a quick and efficient high-performance sonar system with synthetic aperture processing, which offers unparalleled image quality in real-time with no gap at nadir boosting productivity. SHADOWS doubles the resolution while reducing survey costs by one-third. It is a solution for sidescan survey applications: cable route, offshore mining, pre-dredging survey, small objects search on the seabed and shipwreck search



Thierry Gaiffe, CEO

and salvage. Moreover SHADOWS is compatible with GAPS and POSIDONIA, IXSEA's USBL positioning systems.

IXSEA's Fiber Optic Gyroscope (FOG) technology, which has reached the highest international standards for use in space as well, is at the heart of the company's Gyrocompasses and Inertial Navigation Systems. By merging Inertial Navigation Systems (INS) and Global Acoustic Positioning Systems (GAPS, IXSEA's USBL), IXSEA provides accurate and robust subsea positioning where all data is fused into optimal solutions.

Shadows



Vice President: Lisa Morton
Sales Manager™: Rami Tadros
Number of Employees: 5
Annual Sales: \$400,000

Founded in 1991 in Aberdeen, the company moved to Houston in 1996. It has 3 three core areas of operation. Navigation system software and hardware, projects have included minesweeping control, geophysical and seismic navigation systems. The second are is passenger information systems for cruise vessels. The third area is interface hardware and systems of commercial shipping. This third area includes VDRs and a satellite based doppler sonr replacement.

Technology Profile

The company has several versions of its EZNav positioning software in the field for geophysical and offshore construction operations. The Serial Shot Controller is a microprocessor unit which enables precise shot timing with Windows based software. The companys SP2000 fiber optic gyrocompass has been sold to several customers including the US military. The new AMI VR 2272B, is a landmark in VDR/sVDR design. Small in size, but easy to configure and install.

Government of Newfoundland and Labrador

Innovation, Research and Advanced Technologies Branch
Department of Innovation, Trade and Rural Development
P.O. Box 8700, St. John's, NL A1B4J6
Tel: 709-729-7000; Fax: 709-729-5936
www.gov.nl.ca/intrtd • www.nlbusiness.ca

(See Profile on page 31)

Gregg Drilling & Testing, Inc.

2726 Walnut Avenue, Signal Hill, CA 90755
Tel: 562-427-6899; Fax: 562-427-3314
E-mail: info@greggdrilling.com
Internet: www.greggdrilling.com
President: John M. Gregg
Vice President: Patrick Keating
Director of Marketing and Business Development: Tim Boyd

(See Profile on page 30)

Guarino & Cox, LLC

19399 Helenburg Road, Suite 203, Covington, La. 70433
Tel: 985-871-9997; Fax: 985-871-9927
E-mail: s.guarino@guarino-cox.com
President: Greg Cox
Vice President: Sal Guarino
Number of Employees: 20

Guarino & Cox, LLC has been providing naval architecture and engineering services to the marine industry since 1980. The company has a reputation for innovative design and engineering resulting in vessels that are builder friendly yet efficient in operation. Though relatively small in number, the majority of its staff members have more than 20 years of on the job experience. The firm executed the design and contract drawings for the AGOR 23 class of research ships.

Hafmynd - Gavia Ltd

Fiskislod 73, 101 Reykjavik, Iceland
Tel: +354 5112990; Fax: +354 5112999
E-mail: sales@gavia.is
Internet: www.gavia.is

(See Profile on page 35)

Heila Marine Cranes

Via della costituzione 43, Poviglio RE Italy 42028
Tel: +39052296652; Fax: +390522960391
E-mail: seadiscovery@heila.com
CEO: E. Ferrari
President: M. Ferrari
Marketing Director: Ivan B. Zwijnenburg
Number of Employees: 80
Annual Sales: \$20 million

Since 1978, manufacturers of First Class Marine Crane, Deck Equipment and Hydraulic lifting solutions for goods and peopl. Supplying Cranes to all major shipyards, dredging companies and offshore industry. A complete range of Marine Cranes, containing Stiff boom box cranes, knuckle booms, foldable cranes, telescopic cranes and custom build hydraulic cranes. Certification according to Lloyds, BV, ABS, GL, CCS and many others.

Hydra Dynamics

19 Wrenfield Place, The Woodlands, Montgomery, TX 77384
Tel: 936-273-2882; Fax: 936-273-2883
E-mail: sales@hdieng.com
President: J Carter Miller Jr.

International custom manufacturer of severe service hydraulic cylinders and systems. Pioneered specialty coatings, laser cladding, and splash zone rated marine hydraulic equipment. Designed and built the all stainless steel riser tensioner cylinders used on Shell's URSA TLP platform in the GOM. Pioneered composite seals and bearings for offshore and subsea marine hydraulic applications.

Hydroid, LLC

E-mail: lbandstra@hydroidinc.com
President: Christopher von Alt
Vice President of Marketing: Kevin McCarthy
Number of Employees: 20

(See Profile on page 37)

ICAN

Suite 201 1118 Topsail Road, Mount Pearl, Newfoundland Canada A1N 5E7
Tel +7097540400; Fax: +7097540419
E-mail: apower@icanmarine.com
CEO: Neil Chaulk
Marketing Director: Jacquelyn Holden

ICAN was established in November 1996 by Neil Chaulk. Neil, a professional engineer, had been working with the Canadian Coast Guard when he conceived of a company that could provide Differential GPS (DGPS) consulting to other countries. By early 1997, the company had begun efforts to include development and distribution of electronic charting systems (ECS) and other marine navigation software.

ICAN designs and implements navigation and communications software systems as well as providing infrastructure, consulting, and project management.

Interocean Systems

4241 Ponderosa Avenue, Suite A,

San Diego, CA 92123-6501
 Tel: 858-565-8400; Fax: 858-268-9695
 E-mail: sales@interoceansystems.com
 Internet: http://www.interoceansystems.com/

For over 55 years InterOcean Systems has been a leader in the design and manufacture of premier quality oceanographic and environmental equipment and systems. The company continually improve and broadens its line of products. The product line includes S4 Current Meters, Wave & Tide Gauges, Meteorological/Oceanographic (METOC) Buoys, Acoustic Releases, Winches & Marine Handling Systems, Hydrophones, and Remote Oil Spill Detection and Sampling.

IVS 3D

1500A Lafayette Rd, FMB 379, Portsmouth, NH 03801
 Tel: 603-431-1773; Fax: 603-766-0485

E-mail: info@ins3d.com
 CEO: Lindsay Gee
 President: Mark Paton
 Marketing Director: Bill McKernan
 Number of Employees: less than 50

IVS was founded in 1995 to provide interactive 3D visualization and analysis software and services for the ocean mapping industry. The primary product is the Fledermaus software suite, an interactive 3D visualization and analysis software that originated from research at the Ocean Mapping Group (OMG) at the University of New Brunswick. Since the company's inception, the Fledermaus software suite has established itself as the industry leading software for 3D visualization of marine information and associated attributes, specializing in extremely large data sets. The software has been used extensively across

the ocean industry in geological surveys, hydrographic surveys, mine clearance and beach landing surveys; and a variety of geo-hazard surveys in support of offshore engineering projects worldwide. In 2004, IVS was awarded a Federal Laboratory Consortium Award for Excellence in Technology Transfer for collaborative work through a Cooperative Research and Development Agreement with the US Naval Oceanographic Office.

Technology Profile

The Fledermaus software suite is a powerful interactive 3D data visuali-



Lindsay Gee, CEO

Nautronix

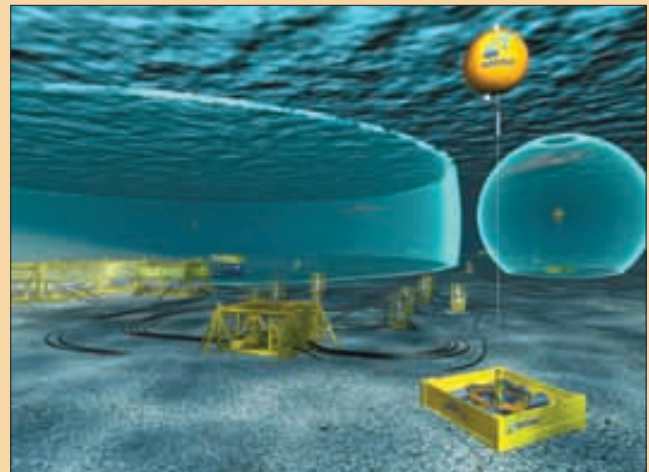
Nautronix House, Howe Moss Avenue, Kirkhill, Dyce, Aberdeen, AB21 0GP, Scotland
 Tel: +44 (0)1224 775700; Fax: +44 (0)1224 775800
 Email info@nautronix.co.uk
 Employees: 270+

Company profile

Nautronix (Holdings) plc is the parent company for the Nautronix Group which consists of four operating divisions: Nautronix plc, Aberdeen - NASNet and Commercial Acoustics; Nautronix Ltd, Fremantle; Nautronix Inc, San Diego CA and Houston TX; and, Nautronix MariPro Inc, Santa Barbara CA. Nautronix (Holdings) plc was incorporated on November 9, 2001 to purchase the shares of Nautronix Ltd, then an ASX listed company, and its subsidiaries. After completing the acquisition of these shares the company became privately owned; moving its headquarters from Fremantle, Australia to Aberdeen, Scotland.

Technology profile

Hydro acoustics has been the dominant technology for positioning, communication with, and sensing of underwater objects since the beginning of the last century. To meet the demand for ocean resources, users of this technology are demanding greater accuracy, reliability, range, depth, data and higher data rates. Nautronix specializes in this field and it has used its experience in conventional narrowband signaling and broadband chirps, as a base from which to concentrate on increasing signal bandwidth to develop Acoustic Digital Spread Spectrum, (ADS²) signaling. This is derived from direct sequence spread spectrum (DSSS) coding



techniques successfully used above water.

Nautronix R&D program is ongoing and its systems are subjected to thorough and extensive testing in both deep and shallow water. Nautronix systems have been widely deployed in a variety of positioning and communications products to military and non military customers. The NASNet system provides the Offshore Oil and Gas community with highly accurate multi user underwater positioning. NAS-HAIL is a robust text and data through water communications system in use in the Australian, British and US Navies. Together these technologies have been applied to provide underwater test and evaluation ranges for those navies.

zation system that is used for a variety of applications including environmental impact assessment, mining, geology, and research, swath bathymetry editing and quality control, marine construction, military applications, and coastal zone mapping.

IXSEA

55 Avenue Auguste Renoir, Marly le Roi, France 78160
 Tel: +33 (0) 1 30 08 98 88; Fax: +33 (0) 1 30 08 88 01
 E-mail: info@ixsea.com
 CEO: Thierry Gaiffe
 Marketing Director: Arnaud Quelquejay
 Sales Director: Eric Richaud

(See Profile on page 39)

Jack Vilas & Associates, Inc.

701 Federal Avenue, Morgan City, La. 70380
 Tel: 985-384-8012; Fax: 985-384-8011
 Internet: <http://www.jackvilas.com>

Jack Vilas & Associates, Inc. was

created in 1986 to meet the needs of the commercial diving industry. Today Jack Vilas & Associates has assembled an experienced group of people in the diving supply market. With a complete line of supplies and services, Jack Vilas & Associates is recognized as a leader in the commercial industry, however JVA also carries MSA safety and Medical Appliances including their line of Mini-Ox analyzers, broad assortment of knives and protective gloves, and many other products beneficial to other fields outside of commercial diving.

Julian A. McDermott Corp.

1639 Stephen Street, Ridgewood, NY 11385
 Tel: 718-456-3606; Fax: 718-381-0229
 E-mail: Vernon@mcdermotttight.com
 President: Vernon McDermott

Sales Manager: John Boc
 Number of Employees: 40
 Annual Sales: \$3 million

Mine field marking lights; Seaplane landing light; Man overboard strobe lights; First LED approved LED Barge navigation lights; First certified LED Navigation lights for Tug Boats. Founded in 1943, Julian A. McDermott is a manufacturer of marine lighting-barge lights, tug boat navigation lights, bouys, solar lights, range lights, handlights, engine room lights.

New products include all LED Barge lights and tug boat lights.

JW Fisher

1953 County St. East Taunton, Mass. 02718
 Tel: 800-622-4744; Fax: 508-880-8949
 E-mail: info@jwfishers.com
 Internet: <http://www.jwfishers.com/>

Measurement Technology NW

4211 - 24th Avenue West, Seattle, WA 98199
 Tel: 206-634-1308; Fax: 206-634-1309
 E-mail: LCI@mtnw-usa.com
 President: Tim O'Neill
 Vice President: Richard Burke
 Marketing Director: Dave Heiss
 Sales Manager: Dave Heiss
 Number of Employees: 20
 Annual Sales: \$2 million

Company Profile

Measurement Technology NW is a technology leader in several diverse instrumentation markets. Since 1987 the company has focused on developing innovative measurement systems using the latest in components, manufacturing methods, and software. Its expertise has been applied to winch line monitoring systems, textile and garment thermal testing systems, large-scale composting systems, and other industries.

Technology Profile

Measurement Technology NW's LCI displays are used to control and monitor speed, payout, and tension (both cable and chain) in single/multi winch systems used for equipment deployment, barge positioning, fixed-place mooring, towing and ship assist activities, dredging, and wherever accurate and reliable line control is required.

The LCI-100 and LCI-90 displays are a balance of size and functionality. Heavy-duty 316 stainless steel front pan-



els and sealed pushbuttons are designed to perform flawlessly in extreme environments from -40°C to +75°C, and are used to access an easy-to-follow English language menu for field calibration changes, I/O channel configuration, alarm or network settings, and screen layout. Tension, payout, and line speed are displayed on a bright, high performance 320x240 electroluminescent display for unmatched readability in all light conditions.

For additional versatility, MTNW's WinchDAC winch monitoring software will display all winch line parameters at a central PC computer interface.

For over 30 years JW Fishers has specialized in the design and manufacture of reasonably priced, high tech underwater search equipment. The product line includes diver-held and boat-towed metal detectors, marine magnetometers, underwater camera systems, ROVs, and side scan sonar. The company was founded in the mid-60s by current president and CEO Jack Fisher. It all started when Fisher, an avid diver, needed an underwater metal detector to use on a salvage project. The product line was expanded from diver-held metal detectors to boat-towed metal detectors and magnetometers. Underwater cameras were a natural follow-on to the product line: customers wanted a tool they could use to look at targets they were finding with their boat-towed detectors or they simply wanted to do a visual search of an area. Recently a family of low cost side scan sonar, the ultimate underwater search system, was added to the line. Fishers side scan sonar is a breakthrough in a high performance, low cost, side scan system equipped with a 17-in. wide thermal printer.

Today the company maintains an active R&D effort to explore and develop new technologies for underwater search in order to offer our customers cost effective solutions.

Kongsberg Mesotech

1598 Kehet Way
Port Coquitlam, B.C.
V3C 5M5 CANADA
Tel: (604) 464-8144
Fax: (604) 941-5423
Email: km.sales.vancouver@kongsberg.com
www.kongsberg-mesotech.com

(See Profile on Page 38)

L-3 Communications Klein Associates, Inc.

11 Klein Drive, Salem, NH 03079

www.seadiscovery.com

Tel: 603-893-6131; Fax: 603-893-8807
E-mail: Michael.mitchell@L-3com.com
Internet: www.L-3klein.com
CEO: William H. Key, Jr.
Vice President: Michael J. Mitchell
Marketing Director: Deborah Durgin
Sales Manager: Dennis McIntyre

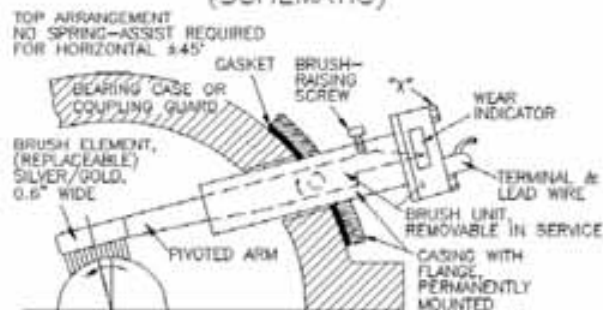
Number of Employees: 65

L-3 Communications Klein Associates, Inc. is a provider of high resolution Side Scan and Multibeam sonar systems, fully Integrated Bridge

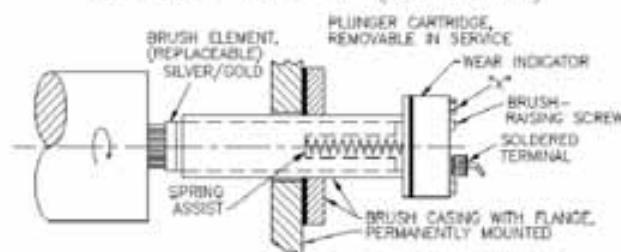
Are Stray Electrical Currents Destroying Your Machinery?

- Sohere SHAFT GROUNDING (EARTHING) BRUSHES are used on propeller shafts, turbines, generators, electric motors, gears, pumps, etc. Failure to properly ground (earth) rotating shafts can result in expensive damage to seals, bearings, and other critical components.
- Self Cleaning. Operate dry or with oil. Gold/silver composite bristles.
- Working parts are removable during operation without contacting adjacent moving parts.
- Brush internals are insulated from casing.
- Brush is suitable for transmission of instrument signals from the rotor without the need of special slip rings.
- Voltage and current monitors available.
- Little or no maintenance.

"TOOTHBRUSH" TYPES "LW," "L" & "S" (SCHEMATIC)



"PLUNGER" TYPE "A" (SCHEMATIC)



ABS TYPE APPROVAL B-568026

© 2005 SOHRE TURBOMACHINERY® INC.

SOHRE TURBOMACHINERY® INC.

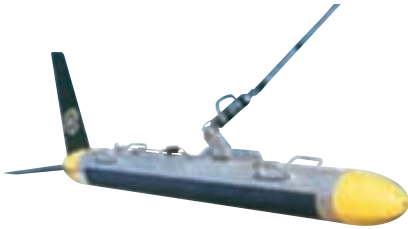
MONSON, MASSACHUSETTS, USA 01057

TEL: (413) 267-0590 FAX: (413) 267-0592

TSOHRE@SOHRETURBO.COM

WWW.SOHRETURBO.COM

Visit www.maritimeequipment.com/mt & Click No. 216



L-3 Klein Side Scan Sonar System

and Communications equipment, and Waterside Security and Surveillance Systems. L-3 Klein sonar equipment has helped find the Titanic, the wreckage of the Space Shuttle Challenger, and downed aircraft including TWA flight 800. L-3 Klein's products are used by governments, navies, surveyors, oil companies, and universities worldwide. L-3 Klein has developed the Harbor Guard Integrated Waterside Surveillance and Security System, which combines radar and video surveillance technology to provide all weather, day/night coverage of over water areas. The HarborGuard system is currently in use by the US Navy for protection of bases facilities worldwide.

Lockheed Martin MS2

199 Borton Landing Road, MS 102-103,
Moorestown, NJ, 08057

Tel: 856-722-4063; Fax: 8562735744

E-mail: Susan.L.martin@lmco.com

CEO: Robert J. Stevens (Chairman, President, and CEO,
Lockheed Martin Corporation)

President: Fred P. Moosally, Lockheed Martin MS2

Number of Employees: 135,000 worldwide, 13,000 at
MS2

Annual Sales: \$37.2 Billion (corporate sales for 2005)

Lockheed Martin MS2 provides surface, air and undersea applications on more than 460 programs for U.S. military and international customers in nearly 50 nations. The same expertise MS2 provides to military customers is being applied to increase the capabilities of U.S. and international civilian agencies.

Technology Profile

MS2 provides whole system solutions. A prime example is our ongoing commitment to the U.S. Navy's transformational work on the Littoral Combat Ship (LCS) program. The Lockheed Martin-led team is rapidly developing a new agile and fast-moving ship for the U.S. Navy using modular technologies and an open architecture approach for an unprecedented build rate. In addition, Lockheed Martin is equipping the LCS with COMBATSS-21, a state-of-the-art combat management system that offers scalability, flexibility, and reliability. MS2 has a robust ship systems business; a key ship systems asset includes the revolutionary Sea SLICE advanced hullform demonstrator ship. This vessel is owned by MS2.



Fred Moosally

MacArtney

G1. Guldagervej 48, DK-6710 Esbjerg V, Denmark

Tel.: +45 7613 2000; Fax: +45 7511 7220

E-mail: mac-dk@macartney.com

Internet: <http://www.macartney.com>

(See Profile on page 36)

Mad Rock Marine Solutions, Inc.

77 Alexander Street, St. John's Newfoundland, Canada
A1E2T8

Tel: +709-772-7547; Fax: +709-772-2462

E-mail: dpelley@madrock.ca

CEO: Dean Pelley

Vice President: Jason Dawe

Number of Employees: 3

Annual Sales: \$100,000

Mad Rock Marine Solutions is a technology company that provides marine operators with evacuation system solutions. Using engineering, regulatory, operations, and human factors expertise, as well as interna-

tional partnerships, Mad Rock is committed to providing the most economically effective solutions to clients evacuation system needs. Mad Rock was incorporated in July 2002 by Dean Pelley and Jason Dawe.

Taking on one of the largest problems in the evacuation system industry, pre-mature lifeboat release, Mad Rock developed a new on-load lifeboat release hook. The patented RocLoc technology has reliable locking stability and superior failure warning characteristics. SOLAS approved, the new hook is adaptable as an OEM or as a retro-fit to existing lifeboats or Fast Rescue Craft.

Magic Instinct Software

Immeuble d'accueil de la Chantreterie, 9 rue Alfred Kastler,
BP 90765, Nantes cedex 03, Region Pays de la Loire,
France 44307

Tel: +330240180971; Fax: +330240180971

E-mail: peio@justmagic.com

CEO: Peio Elissalde

Number of Employees: 3

Annual Sales (US\$): \$260,000

Software development -Linux and MacOSX- for marine applications; References : IFREMÉR, Compagnie Generale de Geophysique, surveys companies. Olex, electronic chart system with real-time automatic 2D/3D seafloor mapping; GeoMovie - underwater digital video georeferencing (ROV)

MAR, Inc. - Ohmsett Facility

Bill Schmidt, Ohmsett Program Manager

PO Box 473, Atlantic Highlands, NJ 07716 USA

Phone: 732-866-7183

Fax: 732-866-7189

bschmidt@ohmsettnj.com • jdelgado@ohmsettnj.com

www.ohmsett.com

Mike Norcio, Chairman & CEO

(See Profile on page 45)

Marine Environmental Management, LLC

PO Box 686, Warrington, Pa. 18976

Tel: 215-491-0543; Fax: 215-491-0566

E-mail: info@marineenvironmentalgmt.com

CEO: Tina E. Albert

President: Harriett A. Millen
Number of Employees: 6
Annual Sales (US\$): \$300,000

Marine Environmental is a leader in the application of microbial based products for the degradation of both hydrocarbon and other organic waste for the marine industry. Tested and used on various oil water separators, oil content monitor readings average between 0-2 ppm. When used on

CHT or MSD systems methane gas reduced with minutes, and grease traps no longer a maintenance issue.

Mariner Underwater Electronics

20/22 Piliis Street, Piraeus, Greece 185 32
Tel: +302104100656/7; Fax: +302104100658
E-mail: marhge@otenet.gr
CEO: Marinos Pittas
Marketing Director: Nikolaos Mavridoglou
Sales Manager: Nikos Pefanis
Number of Employees 6
Annual Sales: approximately \$300,000

Mariner Underwater Electronics was founded in 1980 and specializes in high technology electronics for underwater use. The company's main activity is the production of video inspection systems, cameras, communication equipment, lights, magnetometers - all for underwater use. The company also imports and provides to its clients all underwater electronic equipment which it does not

RBR Ltd.

27 Monk St. Ottawa, Ontario Canada K1S 3Y7
Tel: 613-233-1621; Fax: 613-233-4100
Email: info@rbr-global.com • Web address www.rbr-global.com
President: Dr. Frank Johnson • Vice-President: Kara-Lee Golota
Director Marketing/Sales: Bart Geleynse • No. Employees: 15

Since 1976, RBR Ltd. has been manufacturing high precision instruments for oceanographic, freshwater, groundwater and cryospheric research. Founded by Richard Brancker, the company is now run by a team of enthusiastic engineers and oceanographers and produces instruments calibrated to WOCE standards. RBR Ltd. invests considerable effort research and development, which is carried out in collaboration with customers to ensure that the instruments produced are precisely what the customer wants and can afford. RBR Ltd. has become a leader in the oceanographic instrumentation industry, providing competitive and innovative products to scientists, government

agencies, military, universities, and individuals.

Technology Profile

The product line includes submersible data loggers for CTD, turbidity, fluorescence, dissolved oxygen, pH/ORP, PAR, and other sensors, thermistor chains, tide gauges, and wave gauges. Recent products include a versatile data buoy controller, and laboratory salinometer. Our instruments are all built on a modular platform to permit rapid custom configuration. Calibration equipment at RBR permits traceable calibration for oceanographic instruments including temperature to +/- 0.002 degrees, conductivity to +/- 0.003 mS/cm and pressure to +/- 0.015%. In house calibration of DO, pH, ORP and turbidity complement those for the fundamental physical measurements. Our facilities and capabilities permit us to build many special purpose and custom instruments.

MAR, Inc. - Ohmsett Facility

Bill Schmidt, Ohmsett Program Manager
PO Box 473, Atlantic Highlands, NJ 07716 USA
Phone: 732-866-7183
Fax: 732-866-7189
bschmidt@ohmsettnj.com • jdelgado@ohmsettnj.com
www.ohmsett.com
Mike Norcio, Chairman & CEO

Ohmsett - The National Oil Spill Response Test Facility, located in Leonardo, New Jersey dedicated to providing



independent and objective performance testing of full-scale oil spill response equipment, and improving technologies through research and development. Ohmsett is the only facility in the world where full-scale oil spill response testing, research and training can be conducted with



oil in a realistic simulated marine environment under controlled conditions. The U.S. Department of the Interior, Minerals Management Service operates the facility as part of its mandated requirements to ensure that the best and safest technologies are used in offshore oil and gas operations.

manufacture, at the same undertaking its maintenance, repair and service. The company manufactures a number of electronic devices for underwater use. It also imports and services items which it does not produce, such as ROVs, sonars, analyzers, etc. At present the company is developing and manufacturing a prototype touted as the first-ever ROV to be produced in Greece. Production of the prototype Underwater Towed Vehicle is nearly complete.

Maritime Applied Physics Corporation

1850 Frankfurst Avenue, Baltimore, MD 21226
 Tel: 443-524-3330 x160; Fax: 443-524-3322
 E-mail: macs@mapcorp.com
 President: Mark Rice, P.E.
 Vice President: James Chafe, PhD
 Marketing Director: Peter MacShane
 Number of Employees: 45
 Annual Sales (US\$): \$6 million

Maritime Applied Physics Corporation (MAPC) was formed in 1986 and has a 20-year history of work in the marine technology field, including engineering, prototyping and production work, for government and commercial sponsors. Its primary facility is in Baltimore, Md., where it has a 37,000 sq. ft. engineering and fabrication facility. The facilities contain machining, welding, fabrication, and composite fabrication equipment as well as engineering offices. The company recently delivered two unmanned boats to the U.S. Navy Office of Naval Research, and it is designing and producing a watercraft launch and recovery system for General Dynamics Littoral Combat Ship. In addition, it is developing hybrid electric drive trains for small craft as well as UAV launch and recovery systems for unmanned boats.

Martec-METOCEAN Data Systems

21 Thornhill Drive, Dartmouth Nova Scotia, Canada, B3B 1R9
 Tel: +19024682505 x247; Fax: +19024684442
 E-mail: Emily@metocean.com
 President: Tony Chedrawy
 Sales Manager: Greg Connor
 Number of Employees: 30+
 Annual Sales: \$3 million

Metocean Data Systems develops and manufactures state of the art data acquisition and telemetry systems for remote/severe environments. Metocean Data Systems has developed niche markets in the fields of oceanography, meteorology, defense, oil and gas, and coastal environments on an international basis.

METOCEAN Data Systems has developed a "profiling autonomous float" that can measure the temperature and salinity of oceans anywhere in the world-gathering valuable data about climate change. The float, called PROVOR, is a two meter long tube with an antenna at one end, giving it the appearance of a giant hypodermic needle. Once dropped into the ocean from a plane or ship, the float descends to a depth of 2,000 meters. It drifts with the underwater current for about 10 days, and then ascends slowly, taking measurements the entire way. Once at the surface, it sends its data back to the user via satellite, then descends and repeats the process.

The PROVOR float also has potential for other areas of science. It can be fitted with an optical sensor to measure the depth of light penetration in the ocean, something of interest to biologists.

Materials Systems Inc.

543 Great Road, Littleton, MA 01460
 Tel: 978-486-0404; Fax: 978-486-0706
 E-mail: ideas@matsysinc.com
 President: Dr. Leslie Bowen
 Vice President: Gerald Schmidt

Materials Systems Inc. (MSI) designs and manufactures custom sonar transducers and arrays for a wide range of applications, including side-scan, obstacle avoidance, sub-bottom profiling, swath bathymetry, mine hunting, and acoustic communications. MSI's piezocomposite technology offers extremely broad



Shown is a transducer before encapsulation that MSI designed and manufactures for FarSounder Inc.

bandwidth, high receive sensitivity, high source levels, and conformability for curved arrays. MSI's pioneering development of low cost injection molding for manufacturing piezocomposite opened the way for application of this powerful acoustic transducer material in sonar and ultrasound. This is a mature technology that has been demonstrated on a wide range of applications. MSI is now in full scale production for a variety of commercial and industrial customers.

Technology Profile

MSI's piezocomposite arrays deliver broad bandwidth phased array performance, allowing multiple beams to operate in distinct frequency bands. This allows greater resolution and enhances broad spectrum (chirp) operating techniques. MSI's piezocomposite arrays can also be curved and shaded to achieve a specific beam pattern or to achieve a hydrodynamic profile when mounting the arrays to the curved hull of a vessel or autonomous underwater vehicle (AUV).

Measurement Technology NW

4211 - 24th Avenue West, Seattle, WA 98199
 Tel: 206-634-1308; Fax: 206-634-1309
 E-mail: LCI@mtmw-usa.com
 President: Tim O'Neill
 Vice President: Richard Burke
 Marketing Director: Dave Heiss
 Sales Manager: Dave Heiss

Seabotix

1425 Russ Blvd, T112D, San Diego, CA 92101 USA
Tel: 219-239-5959; Fax: 877-349-7074
E-mail: info@seabotix.com
President: Donald Rodocker
Sales Manager: Jesse Rodocker
Number of Employees: 24
Annual Sales: \$3.5 million

Company Profile

SeaBotix Inc. was founded by Donald Rodocker, an icon in the commercial diving and ROV industry. Donald's accomplishments include founding Pressure Products Group which is now Divex and also Hydrovision. Additionally, Donald performed the first saturation dive to the Andrea Doria in 1973 and also was a part of the team that recovered the gold from the HMS Edinburgh on 1981 being the deepest gold recovery ever. Donald takes this experience along with others in the creation of SeaBotix and the revolutionary small ROV LBV. LBV has quickly become one of the most successful ROVs ever.

Technology Profile

The SeaBotix LBV is unique in it has many aspects found only in large ROVs packaged into a small ROV. Additionally, LBV was the only ROV firstly conceived to be mass produced. The LBV offers a high level of capability, portability, intuitiveness and affordability. No other small ROV offers the same performance level and features as the LBV. Other small ROVs have a large diameter umbilical which creates excessive drag and reduces capability. LBV has the smallest standard umbilical diameter and an ideal weight in water to create an incredibly stable platform. Additionally, SeaBotix has just finished the first Hybrid ROV/Crawler that combines the LBV with a Vortex generator to attach to virtually any surface.



Donald Rodocker



LBC



LBV150

Number of Employees: 20
Annual Sales: \$2 million
(See Profile on page 42)

Nautronix

Nautronix House, Howe Moss Avenue, Kirkhill, Dyce, Aberdeen, AB21 0GP, Scotland
Tel: +44 (0)1224 775700; Fax: +44 (0)1224 775800
Email info@nautronix.co.uk
Employees: 270+

(See Profile on page 41)

Noise Control Engineering, Inc.

799 Middlesex Turnpike, Billerica, MA 01821
Tel: 978-670-5339; Fax: 978-670-7047
E-mail: mikeb@noise-control.com or nonoise@noise-control.com
President: Raymond W. Fisher
Vice President: Michael Bahtirian
Number of Employees: 10
Annual Sales: \$1.5-\$2 million

NCE is an engineering consulting firm that specializes in shipboard noise and vibration measurement and control. Significant accomplishments include acoustic design of the NOAA FRV-40, and R/V SHARP (University of Delaware) first two acoustically quieted Research Vessels that meets international standard (ICES). NCE in partnership with Proteus engineering has also developed the first shipboard noise prediction software with GUI. NCE provides practical solutions to habitability and underwater noise issues on all types of vessels and marine structures.

Optech

300 Interchange Way, Vaughan, Ontario, Canada L4K 5Z8
Tel: +905-660-0808
E-mail: shoals@optech.ca
Chairman: Dr. Allan I. Carswell

President: Donald Carswell
Vice President: Philip Arsenaout - VP, Business Development
Vice President: J. Douglas Houston - VP Operations
Vice President: Joe Liadsky, VP Technology
Number of Employees: 250+

For more than 30 years, Optech has developed, manufactured and marketed advanced laser-based survey instruments. The company offers client-driven solutions in airborne terrestrial mapping, airborne laser bathymetry, laser imaging, space-based atmospheric monitors and spaceborne landing/docking systems, mine cavity monitoring systems and industrial level monitors. Founded by Dr. Allan Carswell, Optech continues to develop the technologically advanced lidar solutions for shallow water surveying.



Dr. Allan I. Carswell

ORE Offshore

4 Little Brook Road, West Wareham, MA 02576
Tel: 508-291-0960; Fax: 508-291-0975
E-mail: sales@ore.com
Vice President: Gregory MacEachern
Number of Employees: 50

ORE Offshore manufactures high accuracy acoustic positioning systems for use within the offshore, military and institutional markets. The company has been supplying acoustic releases and transponders to the world's major research institutions

and government oceanographic offices. ORE Offshore designs, develops, and manufactures acoustic products, instruments and systems for the acquisition of underwater data including applications in the marine, estuarine and coastal environments. It has responded to the needs of the scientific, Naval and offshore communities for many years by providing equipment such as the TrackPoint 3, and the 8242XS Acoustic Release which have become standards in the industry. ORE's positioning systems are used to track underwater vehicles including, ROVs, AUVs and Towed Instrumentation packages. The heart of these products is the Track Point 3 Ultra Short Base Line USBL system.



TrackPoint 3

Pacific Pipe & Pump LLC

24121 56th Ave West, Mountlake Terrace, WA 98043
Tel: 425-640-0376; Fax 425-771-2946
E-mail: nils@pacificpipeandpump.com
President: Nils J E Dragoy
Vice President: Nils P. Dragoy
Number of Employees: 8
Annual Sales: \$800,000

Pacific Pipe & Pump, LLC has served the marine industry since 1994. Customers range from commercial high sea fishing vessels to

Sohre Turbomachinery

PO Box 1099, Monson, Mass. 010507
Tel: 413 267-0590 • Fax: 413-267-0592
info@sohreturbo.com • www.sohreturbo.com

Company Profile

Sohre Turbomachinery Inc., founded in 1971 by John S. Sohre P.E., designs and manufactures shaft grounding brushes and related systems. More than 2000 Sohre Shaft Grounding Brushes have been installed and are being used

in many kinds of rotating equipment including, steam turbines, gas turbines, compressors, pumps, propeller shafts, reduction gears etc.

Technical Profile

Sohre Turbomachinery Inc. provides bristle type fiber brushes for use in shaft grounding (shaft earthing) of all types of stray electrical shaft currents. The brushes can also be used for instrument signal transmission and generator or electric motor on-line diagnostic work.

cruise ships and everything in between. The main focus is Geberit brand pipe systems, HDPE, Geberit Mepla and most recently the Geberit Mapress Stainless Steel and Copper Nickel press fit pipe system. Weight savings and speed of installation is just a couple of the great benefits of our products.

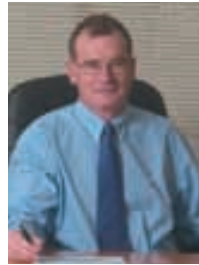
Perry Slingsby Systems

821 Jupiter Park Drive, Jupiter, FL 33458
 Tel: 561-743-7000; Fax: 561-743-1313
 E-mail: Laura.Wynkoop@us.perry.com
 CEO: Martin Anderson
 Managing Director: Martin Anderson
 COO: Bruce Lokay

Perry Slingsby Systems traces its beginnings to the early days of the aviation and ocean engineering industries. John Perry and Fred

Slingsby each began innovative cutting edge businesses that ultimately joined to form the Perry Slingsby Systems of today. As a leader in the design and manufacturing of remote intervention technologies and equipment systems, the company is known worldwide for its dedication to quality and professional excellence.

The experience that has been gained over the past 50 years through design and production of hundreds of ROVs, Trenchers, Tether Management Systems, Submarine



Martin Anderson

Rescue Systems, Submarine Cable Plows, Tooling Systems and Remote Intervention Technologies is unmatched throughout the world.

Production is carried out at two facilities. One in Kirkbymoorside, near York, England, in a 48,000 sq. ft. plant and the other in Jupiter, near Palm Beach, Fla., in a 45,000 sq. ft. plant. Through employing specialist capabilities and technologies, PSS has developed market leading positions in Telecommunications, Defense, Oil & Gas, and related markets. While these markets all differ in their product and service application, they all share the need for remote solutions to problems in hostile environments.

PSS remote intervention technologies and equipment systems have now

SonTek/YSI Inc.

6837 Nancy Ridge Drive, Suite A, San Diego, CA, 92121
 Tel: 858-546-8327; Fax: 858-546-8150
 E-mail: cdelfin@sontek.com or inquiry@sontek.com
 CEO: Rick Omlor
 Executive Vice President: Gayle Rominger
 Number of Employees: 250

Company Profile

Founded in 1992 and a leader in water velocity measurement, SonTek/YSI manufactures a range of affordable, reliable acoustic Doppler systems for water velocity measurement in oceans, harbors, rivers, estuaries, and laboratories.

Since its invention of the Acoustic Doppler Velocimeter, the SonTek/YSI product line has grown into a diverse, multi-faceted mix of high-technology instrumentation. Put simply, our systems tell you how fast the water is moving, where it is moving, and even if it is not moving at all. Additionally, just about all products are offered with an array of ancillary sensors for complete environmental monitoring solutions. In July, 2001, YSI Incorporated, of Yellow Springs, Ohio, acquired the assets of SonTek and formed a new company, SonTek/YSI, that operates as a wholly-owned subsidiary of YSI Inc.

Technology Profile

SonTek's first product, the 10-MHz Acoustic Doppler Velocimeter (ADV), was developed in cooperation with the U.S. Army Corps of Engineers' Waterways Experiment Station. Originally designed for laboratory use, the ADV is a single-point, high-resolution Doppler current meter used for detailed studies of 3D velocity fields. Since its introduction, the ADV has become established as the standard for high-

resolution velocity data. The ADV product line includes laboratory and field instruments with options for integrated sensors (temperature, pressure, compass/tilt) and autonomous operation.

The SonTek product line expanded to include a wide range of current measurement instruments. The Acoustic Doppler Profiler (ADP) is a current profiler with profiling ranges of up to 200 m. At its introduction in 1994, the ADP revolutionized the market for current profilers. SonTek later refined current profiling by introducing the Pulse-Coherent ADP (PCADP). With the introduction of the Argonaut-MD, SonTek produced a new level in user-friendly, low-power Doppler current meters for field applications. The Argonaut line expanded to include the Argonaut-SL and Argonaut-XR for hydrological and harbor monitoring applications and the Argonaut-ADV for single point measurements where power is limited. The flexibility of our RiverSurveyor system was expanded with the introduction of our RiverCat integrated system, which can be used in shallow streams or in areas inaccessible by boat. The RiverCat is a completely self-contained, compact, discharge measurement solution that incorporates GPS, telemetry, and a shallow-water catamaran.



been grouped into Six Business Lines with assigned Business Line leaders bringing you unparalleled knowledge and experience, Vehicle Systems, Tooling & Robotic Systems, Support Services, Defense, Process Controls Products and Geotechnical & Trenching Products.

Pipeline Communications and Technology Inc.

2800 Woodlawn Dr., Ste. 264, Honolulu, HI 96822
Tel: 808-539-3820; Fax: 808-539-3819
E-mail: info@pcatinc.com
CEO: Monte Littlefield
Vice Presidents: David Hales, Wayne Karo
Marketing Director: Brad Wheeler

Pipeline Communications and Technology Inc. provides defense and commercial customers with advanced communications and decision support technologies. It is a Hawaii Qualified High Tech Business that maintains R&D facilities in Honolulu. Its portfolio of solutions includes secure wireless communications technology, innovative road-side bomb jammers that permit friendly communications and maritime radar contact management tools for collision avoidance.

Plymouth Marine Laboratory

Prospect Place, The Ho, Plymouth, Devon, PL1 3DH
Tel: +44 (0)1752 633437; Fax: +44 (0)1752 633101
E-mail: kdav@pml.ac.uk

CEO: Nick Owens - Director
President: Peter Claridge - Director of Operations
Dave Robins - Head of Corporate & External Affairs
Number of Employees: 122

Plymouth Marine Laboratory (PML) is an independent, impartial provider of scientific research, contract services and advice on the marine environment, with a focus on understanding marine ecosystems and reducing uncertainty about the complex processes and structures that sustain life in the seas and their role in the Earth system. PML delivers innovative research and solutions for marine and coastal programs worldwide.

Pro-Tect Plastic and Supply, Inc.

PO Box 1377, Jacksonville, OR 97530
Tel: 541-774-5506; Fax: 541-774-5508
E-mail: Pro-TECT@pro-TECT.net
CEO: Sharri Griffin
Vice President: Jim Griffin
Number of Employees: 3
Annual Sales (US\$): \$1.5 million

Pro-Tect Plastics and Supply, Inc. is a company that specializes in providing the material, equipment, supplies and technical services to package, weatherize and preserve valuable products, parts and equipment. The Pro-Tect shrink-wrap process results in a tough, weather tight barrier, which will protect any shaped object from the elements on a temporary or long-term basis. We also specialize in

supplying materials for containments of Ships in or out of dry dock for repairs or sandblast cleaning.

Specializing in 7, 9 and 10.5 mil heat shrink films that are specifically formulated and developed by Pro-Tect Plastics, heat shrink tapes, spray adhesives, poly woven strapping, Shrinkfast heat tools and parts. Pro-Tect Plastics and Supply, Inc. has successfully completed SSPC Guide 6 Class 1A shrink wrap containments throughout the United States on bridges, dams, ships, buildings, and tanks.

Sea School

8440 4th Street North
St. Petersburg, FL
Tel: 727-577-3992 t.
Fax: 737-522-3155 f.
www.seaschool.com

Sea School has been serving mariners since 1977, offering USCG approved courses such as, maritime affairs, marine engineering, marine transportation and nautical science. The Sea School's USCG Certified Licensed Instructors have knowledge and experience in commercial vessel operations and instruction.

Headquartered in St. Petersburg, FL., the school is nationally renowned with offices across the U.S. and in the Caribbean.

Subconn Inc.

PO Box 2793, Duxbury, MA 02331
Tel: 781 934 0790 • Fax: 781 934 3281
Contact: Mike Stewart
Email: mac-us@macartney. * www.subconn.com

Company Profile

In January 1999 Subconn Inc. was established to service the underwater connector market in the Americas. The company is a joint venture between LVMM Inc., the manufacturer and MacArtney A/S. Subconn Inc. has its headquarters at the new manufacturing facility in Burwell and a sales and marketing base in Boston.

Technical Profile

The connectors, all based on a simple but rugged contact design, are accepted as a cost effective solution by the offshore, military, geophysical, nuclear and ocean science markets.

Subconn concept has been adapted to produce a number of special application connectors. These range from the geophysical telemetry connectors for transition zone applications; high power connectors for subsea systems; field installable and oil filled harness connectors; proximity switches and a complete range of compatible metal shell bulkhead and flange mount connectors.

Teledyne RD Instruments

E-mail: mnewcombe@adelphia.net
9855 Businesspark Avenue, San Diego, CA 92131
Tel: 858-693-1178; Fax: 858-695-1459
E-mail: glopez@teledyne.com
CEO: Robert Mehrabian
General Manager: William Kikendall
Vice President: Harold Maxfield
Business Unit Sales Managers:
Navigation Products - Graham Lester
Marine Measurements Products - Darryl Symonds
Water Resources Products - Earl Childress
Number of Employees: 200 (Teledyne RDI only)
Annual Sales: \$38 million

Company Profile

Teledyne RD Instruments, Inc., located in San Diego, CA, specializes in the design and manufacture of underwater acoustic Doppler products for a wide array of current profiling and precision navigation applications. Originally founded as RD Instruments, the company was formed in 1982 by Fran Rowe and Kent Deines as a result of their development of the industry's first Acoustic Doppler Current Profiler (ADCP), a device capable of profiling currents at up to 128 individual points in the water column.

Through the years, RD Instruments experienced steady growth and has remained the leader in acoustic Doppler instrumentation. In August 2005, RD Instruments was purchased by Teledyne Technologies, and now operates as a wholly owned indirect subsidiary of Teledyne Technologies, Inc. Upon acquisition, the company's name was changed to Teledyne RD Instruments.

The company currently employs over 200 multi-disciplined scientists, engineers, technicians, sales, and support personnel; and resides in a 30,000 square foot ISO-9001:2000 facility that includes state-of-the-art engineering, laboratory, manufacturing, and test areas.

Teledyne RDI is comprised of three distinct business units:

- Marine Measurements: ADCP and Waves products for estuaries to full ocean depth applications
- Navigation Business Unit: Doppler Velocity Logs and diver technology
- Water Resources: Flow and discharge measurement tools for rivers, streams and man-made channels

As Teledyne RDI has grown, so has its customers' need for global service and support. Recognizing this need, Teledyne RDI opened and maintains offices in Europe and China; and trained industry representatives from around



IOS WH-LR on the fantail A-frame Healy.



Thales Geosolutions 75 kHz RDI WH ADCP in Flotec Buoy.

the globe to provide local sales and service.

Technology Profile

With more than 10,000 Acoustic Doppler Current Profilers delivered worldwide, Teledyne RDI's Workhorse ADCP products have become the de-facto standard instrument used worldwide by scientists and field engineers to improve their understanding of water current circulation. Only Teledyne RDI's proven ADCP products can provide: patented BroadBand processing for significantly improved data quality, power efficiency and error detection; a patented two (2) dimensional phased array transducer design for significantly reduced size, weight, and deployment complexity; and a unique four-beam configuration to ensure data quality and reliability.

Teledyne RDI's ADCPs have become synonymous with high quality data, ease of operation, and unsurpassed value. Teledyne RDI's newest current profiler is the Doppler Volume Sampler (DVS) designed for the National Oceanographic and Atmospheric Administration (NOAA) / Pacific Marine Environmental Laboratory (PMEL). The new DVS represents an exponential improvement in performance and cost efficiency compared to traditional single point current measurement devices.

Acoustic Doppler Velocity Logs: Teledyne RDI has also applied their leading edge ADCP technology to a line of Doppler Velocity Logs (DVLs) and diver navigation products. The highly acclaimed Workhorse Navigator DVL provides high rate, high precision velocity and altitude updates for a wide array of applications spanning the military, commercial and scientific markets. Teledyne RDI's standard and specially engineered DVLs are currently aiding in the navigation of hundreds of Autonomous Underwater Vehicles (AUVs), Remotely Operated Vehicles (ROVs), and other manned and unmanned submersibles around the globe.

The new Explorer DVL represents Teledyne RDI's latest navigation advancement. The compact Explorer has been designed to provide Workhorse precision in a package that meets the stringent size, weight and power constraints of the next generation of small, littoral vehicles.

Sohre Turbomachinery

PO Box 1099, Monson, Mass. 010507
Tel: 413 267-0590 • Fax: 413-267-0592
info@sohreturbo.com • www.sohreturbo.com

(See Profile on page 48)

QinetiQ

Cody Technology Team, Ively Road, Farnborough, GU14 0LX
Tel: +44 (0)8700 100942; Fax: +44 (0)252 393399
E-mail: CustomerContact@QinetiQ.com
CEO: Graham Love
Chairman: Sir John Chisholm
Managing Director: Ian Prescott
Number of Employees: 11,500+

QinetiQ is a defense and security technology company that was formed in July 2001 from the U.K. Government's Defense Evaluation & Research Agency (DERA). Diver Reconnaissance system, Hullforms and hydrodynamics, Innovative marine concepts, Marine power system; Communications, Submarine to

surface communications, submarine concepts and design, unmanned underwater Vehicles.

RBR Ltd.

27 Monk St. Ottawa, Ontario Canada K1S 3Y7
Tel: 613-233-1621; Fax: 613-233-4100
Email: info@rbr-global.com
Web address www.rbr-global.com
President: Dr. Frank Johnson
Vice-President: Kara-Lee Golota
Director Marketing/Sales: Bart Geleynse
No. Employees: 15

(See Profile on page 45)

RESON Inc.

100 Lopez Road, Goleta, CA 93117
Tel: 805-964-6260; Fax: 805-964-7537
E-mail: sales@reson.com or sales@reson.dk
CEO: Allan Vestergaard
President: Allan Vestergaard
Sales Manager-Global Sales: Kim Christiansen

Reson meets the most stringent requirements of advanced offshore

surveying activities and marine exploration and provide compelling value to its costumers by offering underwater acoustic solutions that span the entire spectrum of high-performance sonar systems, data collection, and presentation software. Reson specializes in the design, and development of advanced multi-beam sonar systems, single-beam echosounders, transducers, and hydrophones. Ever since 1976, Reson's series of SeaBat multibeam sonar systems, NaviSound Single-beam echosounders, PDS2000 survey software and related hydrographic equipment have made Reson a respected partner for customers in the dredging, hydrographic, marine research, naval, and offshore oil and gas sectors.

Tyco Telecommunications

60 Columbia Road, Morristown, NJ 07960
Tel: 866.892.6611; Fax: 978.656.8131
Email: sales-hq@tycotelecom.com
Number of Employees: 650

Tyco Telecommunications, an industry pioneer in undersea communications technology and marine services, is a leading supplier for today's undersea communications requirements. Drawing on its heritage of technical innovation the company delivers the most reliable, high-quality solutions to customers with undersea communications needs vital to their core mission. With more than five decades of operation, Tyco Telecommunications has designed, manufactured, and installed more than 80 undersea fiber optic systems around the world. Tyco Telecommunications' global presence, backed by industry leading research and development laboratories, manufacturing facilities, ships, depots, and management team work together to implement integrated repeatered and repeaterless solutions and network upgrades, with unsurpassed reliability, from system conception and design to ongoing maintenance that support the needs of telecommunications, Internet providers, offshore oil and gas and science customers worldwide.

Technology Profile

Tyco Telecommunications' laboratories continue to build on a legacy of leading technological innovation. Tyco Telecommunications' efficient and effective cycle from research to product realization ensures that customers receive the most advanced solutions available while minimizing risk. Current research and development efforts are driven by customer demand for lower-cost solutions that

enable long-term growth. Tyco Telecommunications' commitment to forward-looking, customer-focused technology enables the delivery of the most cost-efficient networks on the market.

Technology capabilities include:

- Repeatered Communication Systems
- Tyco SL 17 Undersea Cable - over 128,000 km installed
- 980 nm Repeaters with high loss loop back supervisory monitoring - over 355 million amplifier hours without amplifier failures
- DWDM, 10 Gb/s transmission with Forward Error Correction allows virtually error free transmission
- Repeater-less Communication Systems
- Successfully deployed near 400km km segment capable of carrying 320Gbs
- Cost effective regional festoon systems
- Offshore Oil and Gas Systems
- Fully integrated solutions for linking rig to land and rig to rig



Bill Marra

Products include: SeaBat multi-beam sonar systems, NaviSound single-beam echo sounders, Sound Velocity Profilers (SVP), Transducers & Hydrophones, and PDS2000 software to supply automated hydrographic data systems.

Rockland Scientific International

520 Dupplin Road, Victoria BC Canada V9A 4B6
 Tel: +2503701688; Fax: +2503700234
 E-mail: Fabian@rocklandscientific.com
 President: Rolf Lueck
 Vice President: Fabian Wolk
 Number of Employees: 6
 Annual Sales: \$1.5 million

Rockland Scientific designs and manufactures high-accuracy instrumentation for oceanographic research, and is a leading supplier of measurement systems for microstructure turbulence in natural waters. The company was founded by Rolf Lueck and Fabian Wolk, both physical oceanographers. Rockland Scientific specializes in oceanic turbulence and provides instrumentation and services for its measurement. The instrumentation was originally designed to address fundamental scientific

research objectives. With Rockland's continuing R&D efforts and close collaboration with end users, these instruments have now evolved into turn-key operational tools that can be configured for a variety of applications.

Rotech Subsea USA, LLC

11261 Richmond Avenue G110, Houston, TX
 Tel: 281-759-1245; Fax: 281-759-1246
 E-mail: sarah.hargrave@rotech.co.uk
 Managing Director: Ken Stewart
 President: Kenneth R. Mackie
 General Manager: Dirk Wagenaar

Rotech Subsea is digging up business all over the world providing mass flow excavation services for multiple applications such as pipeline trenching, wellhead excavations, platform pile excavations, rock dump excavations, and cable trenching. The tools were designed with precise excavation power and stability in mind. Water is brought in through two counter-rotating impellers and redirected to the seabed in the form of a high velocity, high volume, yet low pressure water column that can move materials with shear strengths of up

to 60 Kpa. While hung from the vessel's crane or A-Frame, a multi-beam sonar system that is attached to the tool shows a picture of all hard materials which aids in locating problem areas and shows trench depth.

Rotech was able to excavate four pipelines for a client who needed to make repairs in 3,000 ft. water depths with the use of a deep sea power pack supplied by a third party. As a result, the company is now building two new power packs with expectations of achieving depths as great as 10,000 ft.



Kenneth R. Mackie, CEO

Rutter Technologies

70 Brookfield Road, St. John's Newfoundland, Canada
 Tel: +7093684213; Fax: +7093681337
 E-mail: golscamp@ruttertech.com
 CEO: Donald I. Clarke
 President: Byron Dawe
 Number of Employees: 410
 Annual Sales: \$80 million
(See Profile Below)

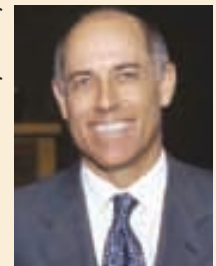
Rutter Technologies

70 Brookfield Road, St. John's Newfoundland, Canada A1E3T9
 Tel: +7093684213; Fax: +7093681337
 E-mail: golscamp@ruttertech.com
 CEO: Donald I. Clarke • President: Byron Dawe • Vice President: Gerald F. Olskamp
 Number of Employees: 410 • Annual Sales: \$80 million

Rutter Technologies was established in 1998 to develop, manufacture and commercialize a Voyage Data Recorder (VDR) in response to then pending International Maritime Organization (IMO) regulations making these mandatory for certain classes of vessels. Rutter's commercialization efforts have been successful and the company is a leader in VDR technology.

Rutter is an innovative company. Some of the early differentiating factors for its voyage data recorder (VDR) were the recording time capability. While many competitors were offering the minimum required 12 hours of recorded history, Rutter recognized that many marine incidents can go undetected for days and offered inno-

vative packaged with up to 30 days of recording time. Now vessel owners are offered as much as 90 days of recording time. As well, Rutter recognized early that existing technologies to capture radar images and conversations on a ship's bridge were inadequate for the task. The company proceeded to develop high resolution video recording and playback technology to improve radar image capture and developed its own high fidelity audio recording module to ensure clearer capture of voices on a ship's bridge. Rutter's sigma S6 high resolution Radar Technology is used worldwide for applications including ice navigation, collision avoidance, bird tracking and a number of security applications.



Donald I. Clarke, CEO

Schilling Robotics LLC

201 Cousteau Place, Davis, CA 95616-5412

Tel: 530-753-6718; Fax: 530-753-8092

E-mail: sales@schilling.com

CEO: Tyler Schilling

President: John Wetzel

Marketing Directors: Wes Gerriets/Jason Stanley

Number of Employees: 130

Since its founding in 1985, Schilling Robotics has designed and manufactured remotely operated equipment for underwater environments. The company's initial products were remote manipulator systems, and Schilling quickly became a leading supplier of manipulator systems for the ROVs and cable trenching machines used in offshore oil, telecommunications, scientific, and military operations.



Tyler Schilling, CEO

More than 20 years later, the company continues to specialize in the design, development, manufacture, and field service of remotely operated systems. Products now include electric and hydraulic work-class remotely operated vehicles (ROVs), and Schilling's QUEST ROV was the first commercially available electric work-class system.

Technology Profile

Schilling Robotics produces the Remote Systems Engine (RSE), a set of modular equipment items for underwater propulsion, actuation, control, and communication. Products include the QUEST electric work-class remotely operated vehicle (ROV) system, a complete family of hydraulic ROVs, and four standard remote manipulator systems. All Schilling ROVs are based on RSE building blocks.

The QUEST electric ROV, which

delivers performance equivalent to a 100-hp system, offers speed, simplicity, small size, light weight, and exceptional capability.

Schilling offers four standard telerobotic manipulator systems (the TITAN 4, CONAN, ORION, and RigMaster) with a wide range of functions, sizes, lift capacities, ranges of motion, control systems, and dexterities. In the dexterous, seven-function, titanium TITAN 4, all subsea electronics are inside the manipulator arm, which increases reliability, enhances troubleshooting, and decreases weight and spares requirements.

SAIC

221 Third Street Building "A" Newport, RI 02840

Tel: 401-847-4210 or 401-848-7773; Fax: 401-849-1585

E-mail: Donald.a.jagoe@saic.com

CEO, President: Kenneth C. Dahlberg

CEO: Mark W. Sopp

Marketing Director: Ron Zollars

Number of Employees: 43,000+

Annual Sales (US\$): \$7.2 Billion

Founded by Dr. J. Robert Beyster and a small group of scientists in 1969, Science Applications International Corporation (SAIC), a Fortune 500 company, now ranks as the largest employee-owned research and engineering firm in the U.S. SAIC and its subsidiaries have more than 43,000 employees with offices in over 150 cities worldwide.

SAIC has more than 30 years experience solving complex technical problems for government and commercial customers in a variety of industries.

Seabotix

1425 Russ Blvd, T112D, San Diego, CA 92101 USA

Tel: 219-239-5959; Fax: 877-349-7074

E-mail: info@seabotix.com

President: Donald Rodocker

Sales Manager: Jesse Rodocker

Number of Employees: 24

Annual Sales: \$3.5 million

(See Profile on page 47)

Seaeye Marine Ltd

Lower Quay Rd, Fareham, Hampshire, United Kingdom
PO16 0RQ

Tel: +44 1329 289000; Fax: +44 1329 289001

E-mail: rovs@seaeye.com

CEO: Chris Tarmey

Managing Director: Matt Bates

Engineering Director: Jon Robertson

Marketing Director: Chris Tarmey

Sales Director: Dave Eggers

Number of Employees: 55

Annual Sales (US\$): \$12 million

(See Profile on page 18)

SeaTrepid LLC

2333 Jones Road, Pottstown, PA19465

Tel: 610-469-1730; Fax: 610-469-1730

E-mail: info@seatrepid.com

CEO: Karen Christ

Vice President: Bob Christ

Marketing Director: Scott Shaw

Number of Employees: 4

Annual Sales: \$750,000

SeaTrepid is a marine consulting and sales firm specializing in underwater acoustic and robotic equipment for Homeland Security, Public Safety Diving, Commercial Inspections and Military Support. The Products Represented by SeaTrepid are classified as underwater vehicles, sensors and user interface solutions tailored to customer requirements. Also produced by SeaTrepid are various training materials as well as the first comprehensive Observation Class ROV Manual scheduled to be published by Elsevier Book Publishing Company in Summer 2006.

Seimac Limited

271 Brownlow Avenue, Dartmouth NS Canada BBB1W6

Tel: +9024683007; Fax: +9024683009

E-mail: info@seimac.com

President: Jim Hanlon

Vice President: Paul Adlakh (Marketing & Sales)

Number of Employees: 50

Annual Sales: > \$10 million

Seimac Limited is a 28 year old company that specializes in the design and manufacture of specialized mission critical tracking and telemetry products for use by search and rescue, law enforcement and science professionals throughout the world. Seimac

currently produces radios for: Search and Rescue; COSPAS_SARSAT Beacons; Direction Finders; Datum Marker Buoys; Telemetry and Tracking; Miniaturized ARGOS Satellite Transmitters; GOES Satellite Transmitters; NOVATECH VHF Beacons & Xenon Flashers.

Sidus Solutions

2785 Kurtz St. Ste. 1, San Diego, Calif. 92110
CEO: Leonard Pool
Marketing Director: Leslie Gill
Number of Employees: 10
Annual Sales (US\$): \$5 million

Founded in September 2000, SSI's team encompasses more than 40 years of combined experience. This team is built of individuals who are uniquely suited and experienced in the industry of robotic positioning, control and monitoring systems. The primary business sectors Sidus Solutions has marketed to have been the oil & gas exploration & production, refineries, oceanographic research and power generation industries. Sidus Solutions offers a line of state-of-the-art security and surveillance products, including: SSI Pan-and-Tilt System and Hernis CCTV.



Leonard Pool, CEO

SonTek/YSI Inc.

6837 Nancy Ridge Drive, Suite A, San Diego, CA, 92121
Tel: 858-546-8327; Fax: 858-546-8150
E-mail: cdelfin@sontek.com or inquiry@sontek.com
CEO: Rick Omlor
Executive Vice President: Gayle Rominger
Number of Employees: 250

(See Profile on page 49)

Sound Ocean Systems, Inc.

PO Box 2978, Redmond, WA 98073-2978
Tel: 425-869-1834; Fax 425-869-5554
E-mail: inquiries@soundocean.com
President: Ted Brockett
Vice President: John Moore



Sales Manager: Brian Reid
Number of Employees: 15
Annual Sales: \$3 million

Sound Ocean Systems, Inc. (SOSI) was established in 1978 to provide marine and undersea systems and related services at realistic costs through innovative engineering. The company offers unique first hand experience and capability in the development and operation of deep water systems designed for 6,000 m depth applications. SOSI ocean observation and environmental data logging systems include shallow water, coastal and open-ocean data buoys and ocean data platforms. Buoy systems are supplied complete including buoy, mooring, data logger, telemetry, power, and oceanographic and meteorological sensors. Data telemetry options include ARGOS, RF, Iridium and other satellite based telemetry systems. Underwater vehicles produced by SOSI include neutrally buoyant towed bodies and non-buoyant vehicles used for sonar applications, and video/photographic surveys of the seafloor or objects on the seafloor.

Sperry Maine

1070 Seminole Trail, Charlottesville, VA 22901-2891
Tel: 434-874-2000; Fax: 434-874-2259
President: John McMaso
Vice President: J. Nolasco DaCunha
Marketing Director: Frank Soccoli

Sperry Marine is a business unit of Northrop Grumman Corp. Sperry Marine provides navigation and ship

control solutions for the international marine industry with customer service and support through offices in 16 countries, sales representatives in 47 countries, and authorized service depots in more than 250 locations around the world. Sperry Marine markets a broad range of marine navigation, ship control, information and automation systems for the world's merchant ships and naval vessels.

Subconn Inc.

PO Box 2793, Duxbury, MA 02331
Tel: 781 934 0790 • Fax: 781 934 3281
Contact: Mike Stewart
Email: mac-us@macartney. • www.subconn.com
(See Profile on page 50)

Teledyne Benthos

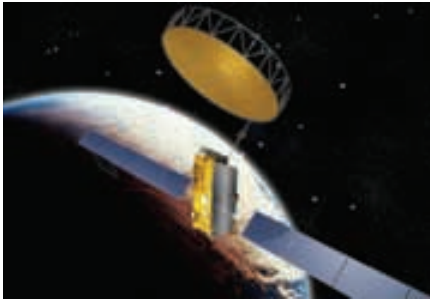
49 Edgerton Drive, North Falmouth, MA 02556
Tel: 508-563-1000; Fax: 508-563-6444
E-mail: pzentz@benthos.com
CEO and President: Ron Marsiglio
Vice President: Francois Leroy
Marketing Director: Peter Zentz
Number of Employees: 150
Annual Sales: \$25 million
(See Profile on page 16)

Teledyne RD Instruments

E-mail: mnewcombe@adelphia.net
 9855 Businesspark Avenue, San Diego, CA 92131
Tel: 858-693-1178; Fax: 858-695-1459
E-mail: glopez@teledyne.com
CEO: Robert Mehrabian
General Manager: William Kikendall
Vice President: Harold Maxfield
Business Unit Sales Managers:
Navigation Products - Graham Lester
Marine Measurements Products - Darryl Symonds
Water Resources Products - Earl Childress
Number of Employees: 200 (Teledyne RDI only)
Annual Sales: \$38 million
(See Profile on page 51)

Telenor Satellite Services

1101 Wootton Pkwy, 10th floor, Rockville, MD 20852
Tel: 301-838-7805; Fax: 301-838-7832
E-mail: Thomas.surface@telenor-usa.com
Internet: www.telenor.com
CEO: Morten Tengs
President (U.S.): Britt Carina Horncastle
Vice President (U.S.): Dave Farmer
Sales Director: Bo Norton
Number of Employees: 550 Globally



I-4 Satellite for new BGAN services.

Telenor Satellite Services, a subsidiary of Telenor AS of Norway, has more than 35 years of international satellite communications experience providing global communications via satellite for customers on land, at sea, and in flight. Telenor Satellite Services owns and operates a global network of teleports located at Eik (Norway) and Southbury (Connecticut) and Santa Paula (California) in the U.S., and operates VSAT hubs at facilities in Nittedal (Norway) and Prague (Czech Rep). The company uses the satellite systems of Inmarsat, Intelsat, Iridium, New Skies, Satmex, Thuraya and Telenor's own satellites for its services. Telenor also offers a complete array of secure communications services via STU-III, STU-IIB, STE, KIV-7, and KG-84 technologies. Telenor's expanded product portfolio offers broadband satellite solutions, on demand services, and an innovative menu of value-added services meet communications requirements of users around the globe.

Tenix Lads Corporation

Rhys Barker
 Manager, Business Develop.
 rhys.barker@tenix.com
 61-8-8300-4447
 61-8-8349-7528
<http://www.tenix.com/>

Tenix LADS Corporation and its U.S. subsidiary, Tenix LADS Inc., are leaders in the the supply of airborne

laser bathymetry systems and services. Tenix LADS Corporation owns and operates the Laser Airborne Depth Sounder (LADS), which is a fast, cost-effective tool for accurate bathymetric survey in coastal waters to 70 m deep. LADS is capable of surveying shallow, complex areas up to 20 times faster than survey ships and at 20 percent of the cost.

Tenix LADS Corporation uses our latest generation LADS Mk II, mounted in a deHavilland Dash 8-202, and operated by an experienced survey team. ALADS operates in a broad range of environmental conditions, and LADS data has a variety of uses, including nautical charting; EEZ delimitation; oil and gas exploration; coastal zone, beach and coral reef management; and strategic defence applications.

The Cornell Group, Inc.

4017 Williamsburg Court, Fairfax, VA 22032
 Tel: 703-877-2080; Fax: 703-877-2081
 E-mail: tcg@thecornellgroup.com
 CEO: Anita Gambhir
 Number of Employees: 15
 Annual Sales: \$10 million

The Cornell Group is a multi-disciplinary management-consulting firm providing Strategic Planning, Privatization, Master Planning, Institutional and Regulatory Restructuring, Economic Restructuring, Investment Planning and Infrastructure Development advice to senior management in the Port, Waterways, Aviation, Rail and Intermodal Transportation Industries. Our Port Planning and Engineering Group provides assistance with Master Planning and Operations Improvement at Ports. The Information Technology Group assists port and transportation industry clients improve productivity and enhance competitiveness through

better application of Information Technology and Training. Our Investment Banking Operations provides Strategic, Transaction and Financial Advisory assistance for Infrastructure projects worldwide.

Tritech International Limited

Perengrine Road, Westhill, Business Park, Westhill, Aberdeen, U.K., Ab32 6JL
 Tel: + 01224744111; Fax +01224741771
 E-mail: reception@tritech.co.uk
 CEO: Richard Marsh
 Sales Manager: Paul Hudson
 Number of Employees: 25
 Annual Sales: \$10 million

Tritech International is an oil-related company in Scotland. The company is a current winner of the prestigious Queen's Award for Innovation. Past honors include the Royal Society of Edinburgh's Millennium Award, and our first Queen's Award, in 1994, for Export Achievement. A leader in the provision of sensors and tools for ROV and AUV markets, Tritech embraces three different technologies: Subsea imaging and measuring systems with both acoustic and video sensors, and many state of the art mechanical and electrical products. Each product can be integrated with every other product on a system network.

Technology Profile:

Tritech partners with technology leaders in several different, but complementary engineering disciplines. The principal product range is a family of digital CHIRP sonars starting with the smallest Micron DST through to the Super SeaKing DST for the professional offshore market. Many other acoustic sensors including Altimeters, Side Scan sonars, Parametric sonars and Modems, have established themselves worldwide as the finest quality subsea products

available today. Tritech also specializes in a comprehensive range of sub-sea cameras and red and green laser metrology systems. A fast developing range of mechatronic equipment that is very important to the company's future are Intelligent Valve Packs, Intelligent Power Packs, solid state motion reference units and Gyro compasses.

Triton Imaging, Inc.

125 Westridge Drive, Watsonville, CA 95076
Tel: 831-722-7373; Fax: 831-772-1405
E-mail: jthomas@tritonimaging.com
CEO: Kathleen Newton
President: Kathleen Newton
Marketing Director: John Thomas
Number of Employees: 8
Annual Sales: \$2 million

Triton Imaging, Inc. is a software and hardware provider of multi-component data acquisition systems and advanced data processing solutions. Founded in 1983, Triton excels at complex system integration, sophisticated visualization platforms, and rapid product prototyping of new imaging concepts. Triton pioneered commercial data acquisition and data processing products for seafloor imaging applications. Triton is implementing new technology initiatives that provide a broad range of answers to the increasing demand for advanced system capabilities, including visualization technology for scan-based security products for homeland defense. Triton also develops and markets turnkey solutions for acquiring, processing, visualizing, and interpreting a wide array of data types including sidescan sonar, forward-looking sonar, synthetic aperture sonar, multibeam bathymetry, sub-bottom profiler, shallow seismic, ground penetrating radar, volumetric data, navigation, motion reference, laser line scan and many other scan-based information streams. The true power of Triton imaging technology

www.seadiscovery.com

lies in its "intelligent connectivity" - the ability to acquire and combine data from a myriad of sensors and ancillary systems, and to automatically present the results in an intuitive manner.

Turner Designs, Inc

845 W. Maude Avenue, Sunnyvale, CA USA 94085
Tel: 408-749-0994; Fax: 408-749-0998
E-mail: sales@turnerdesigns.com
CEO: James Crawford
President: James Crawford
Vice President: David Doting
Marketing Director: Chelsea Donovan
Sales Manager: Patrick Sanders
Number of Employees: 40
Annual Sales: \$7 million

Turner Designs, Inc. was founded in 1972 by George Turner and for



three decades, has manufactured rugged and reliable field, laboratory, submersible and on-line instrumentation. Turner has produced thousands of fluorimeters which allow scientists, engineers and technicians to take field and laboratory measurements in accordance with strict analytical standards.

Tyco Telecommunications

60 Columbia Road, Morristown, NJ 07960
Tel: 866.892.6611; Fax: 978.656.8131
Email: sales-hq@tycotelecom.com
Number of Employees: 650

(See Profile on page 52)

Vetrotech Saint-Gobain Marine

Graafschap Hornelaan 196, Weert, Netherlands, 6004HT
Tel: +31495574435; Fax: +31495574436
E-mail: info@vetrotech.nl
Number of Employees: 500

Annual Sales: \$36 million

Vetrotech Saint-Gobain has a history of supplying fire resisting glass in the marine market. Experience combined with the fire resisting glass products offers the best in optical and safety performance in marine applications. The SGG Contraflam Marine A60 apart from being fire and hose-stream resistant it can be combined with multiple properties such as sound insulation, sun reflection, bullet and explosion resistance. The company is developing a new A0 product that fulfills the high optical demands for wheelhouse windows required on Offshore supply vessels.

Waller Marine, Inc.

14410 W. Sylvanfield, Dr., Houston TX 77014
Tel: 281-444-9650; Fax: 281-444-8055
E-mail: awaller@wallermarine.com
CEO: David B. Waller
Vice President: Stephen McKillop
Marketing Director: Anthony P. Waller
Number of Employees: 30

Waller Marine, Inc is a Naval Architectural, Marine Engineering & Marine Contracting company serving all aspects of the marine transportation and offshore oil & gas industries. While the company provides classic naval architectural support to its clients for new and existing vessels, drill rigs and production units, there is much focus on new, innovative applications of traditional land based technologies to floating or offshore use. Recent and current projects cover large floating power generation facilities, gas to liquids (GTL) plants for the production of ultra clean diesels and gasolines, and large scale floating gas to methanol plants.

Washington Chain & Supply Co.

2901 Utah Ave. South, Seattle, WA 98134
Tel: 206-623-8500; Fax 206-621-9834
E-mail: craig@wachain.com
President: Darrell Castle
Vice President: Bert Cehovet

Number of Employees: 26
Annual Sales: \$12 million

Washington Chain & Supply has been filling the supply & service needs of the marine, construction, and offshore drilling industries since 1954. Maintaining perhaps the largest inventory of heavy hardware & wire rope in the U.S. WCS can provide Certificates with our 1,000 ton testing machines, certified by American Bureau of Shipping, Lloyds Register of Shipping, U.S. Dept. of Labor & DNV.

Woods Hole Group Inc.

81 Technology Park Drive, East Falmouth, MA 02536
Tel: 508-495-8253; Fax: 508-540-1001
E-mail: wdgraffon@whgrp.com
CEO: Dr. David Aubrey
President: Dennis Aubrey
Vice President: Robert P. Hamilton, Jr.
Sales Manager: William D. Grafton III
General Manager: Robert Catalano
Engineering Director: Dr. Bruce Magnell

The Woods Hole Group, Inc. was founded in 1986 by Dr. David Aubrey, who assembled a team of coastal sciences, engineering and planning personnel. The firm estab-

lished a reputation for improving transboundary environmental policy with projects in the Black and Caspian Seas. To bolster offshore capabilities, an oceanographic equipment company was acquired in 1991, adding oceanographic and engineering personnel. Building upon a standard product line of wave, tide and current meters (WHISL), the emerging oceanography and measurement systems team grew to specialize in real-time systems and developed proprietary software for data display and management. The team specializes in real-time measurement systems and physical oceanographic/engineering studies for offshore energy and port/harbor applications worldwide including a network of international representatives in 20 countries.

Technology Profile

Woods Hole Group's coastal sciences, engineering and planning team has developed unique computer models for waves, tides, currents, sedi-

ment transport, and contaminant transport and fate. They are applied to design shore protection, dredging, habitat restoration and remediation projects. Its oceanography and measurement systems team designs, integrates, installs and operates real-time met-ocean monitoring systems for offshore oil and gas applications, as well as port and harbor environments. Proprietary software was developed to turn real-time data into the information required by marine decision-makers. This team is actively involved with new research and development initiatives involving sea bed telemetry of deepwater currents.



Robert Catalano, VP



Robert P. Hamilton, Jr, VP

IXSEA Expands in U.S.

IXSEA announced the appointment of Larry Buchanan as Sales Manager for the Gulf of Mexico and West Coast of the U.S. Buchanan attended Indiana University. He joined the offshore survey sector in Houston, Texas in the 1970's and since, has worked extensively in the marine surveying business. His experience in the offshore industry includes hydrographic and marine surveying and construction projects worldwide. Buchanan has authored numerous works and serves with several industry organizations for establishing survey standards and continues to work toward improvements in tools and techniques in marine surveying and mapping.

"We are delighted that Larry has come onboard and he indeed brings extensive experience in both the offshore



and survey industries," said Managing Director of IXSEA INC., Stephane Loel. "This comes at a time when IXSEA is expanding its operations: we have recently moved to new offices in Woburn, MA to meet the demands of our customers and our growing business."

The new IXSEA address is: IXSEA Inc., 500 West Cummings Park, Suite 1000, Woburn, MA 01801, Tel: (781) 937-8800; Fax: (781) 937-8806.

Canyon Charters Tyco Decisive

Tyco Telecommunications has chartered the Tyco Decisive to Houston-based Canyon Offshore for four months beginning June 1, 2006. The ship will function as the support platform for two remotely operated vehicles (ROVs) including the pipeline trencher Supertrencher II and the work-class ROV Triton XL. The operation will facilitate trenching and inspection in two areas: the Gulf of Mexico and the North Sea.

"Canyon's ROV capabilities combined with the state-of-the-art Tyco Decisive provide the oil and gas industry an innovative and cost-effective alternative to traditional solutions at a time when resources are limited and prices are rising," stated Scott Sparks, vice president of Trenching Services for Canyon Offshore.

The Tyco Decisive, one of six Reliance-class vessels in the Tyco Telecommunications fleet, is a versatile, 140-m vessel based in Baltimore. The vessel has an American Bureau of Shipping dynamic positioning system 2 (DPS-2) classification, enabling a variety of complex offshore operations anywhere in the world.

Caledonian MacBrayne Buy AC-ROV

AC-CESS sold an AC-ROV vehicle to Scottish West Coast and Islands ferry operator Caledonian MacBrayne (CalMac). "It's the best underwater vehicle of this type I've seen," said CalMac representative Mr John Solton. "We can now carry out on the spot prop and hull inspections with the minimum of fuss and disruption. The AC-ROV ticks all our inspection boxes: it fits in one case, is very rapid to deploy (under 3 minutes), it fly's sideways, is robust and simple to use." CalMac currently owns and operates a modern fleet of 31 vessels providing passenger, vehicle and shipping services to the islands off the West Coast of Scotland and in the Clyde estuary. There are currently 26 routes within the network. In 2004, more than 5 million passengers and over one million accompanied cars were carried on the company's services.

CARIS Call for Papers for Kuala Lumpur in 2007

CARIS is inviting submissions for abstracts for paper presentations at CARIS 2007, 11th CARIS User Group Conference and Educational Sessions, March 5 - 8 in Kuala Lumpur, Malaysia.

Attendees attend CARIS conferences to explore the future of marine and hydrographic geomatics software.

CARIS 2007 organizers are seeking submissions that are applicable to one or more of the following topics: Hydrographic Operations; Production System; Ports and Waterways; Law of the Sea; and Geospatial Standards: Advantages.

CARIS is offering free conference registration for those speakers selected. Abstract submission deadline is November 15, 2006. Full details on the submission process are available online at www.caris.com/caris2007.

Statoil, Schlumberger Work to Extend Life of O&G Fields

Statoil ASA and Schlumberger Information Solutions (SIS) entered into a three-year agreement to develop new production optimization technologies to extend the life of oil and gas fields, an agreement valued at \$16m.

"The goal of the project Production and Process Optimization is to develop methodology, technology and IT solutions that will enable us to have a set of consistent and updated models of the subsurface and topside facilities as a tool for improved reservoir and production management," said Rolf H. Utseth, vice president of research and technology, Subsea Increased Oil Recovery, Statoil.

Rutter Names New Engineering and Automation President

Rutter Inc. said that Glenn Willar, P. Eng. will become the new President of Rutter Engineering & Automation Inc. "This decision follows a succession planning exercise that began some months ago when Mr. Gerry Germain informed us that he would retire this year," said Donald I. Clarke, Chairman and CEO of Rutter Inc.



The NYS Thruway Authority/Canal Corporation is seeking to retain a qualified Naval Architecture/Engineering firm to provide design services for the design of a "Hopper Configuration" Container Transport Barge.

Interested firms should contact Peter Weisbecker at (518) 471-5375 for a more complete description of the requirements.

Visit www.maritimeequipment.com/mt & Click No. 210

For information on posting a job on these pages and on the "JOBS" site at www.seadiscovery.com, contact Dale Barnett at tel: 212-477-6700; fax: 212-254-6271; or e-mail: barnett@marinelink.com

ASSET MANAGER

Job Location: United Kingdom, North East, County Durham

A rapidly expanding International Subsea Contractor based in Teesside, with an industry leading product portfolio is seeking to appoint an experienced Asset Manager. Reporting to the Operations Director, the role is one of Senior Manager with responsibility for tactical and strategic functional management. The role requires that safety and reliability are diligently applied to equipment selection, deployment, operation and maintenance. Ideally you will be professionally qualified (Senior Marine Qualification Deck or Engineering) or similar, and a management degree - (MBA) would be highly advantageous. Commercially astute, and with substantial proven management experience, you will be capable of working at a strategic level and will demonstrate either direct comparable experience or a high degree of transferable skills/experience in offshore asset management, Project Management, staff management and customer interfacing. This is a leading role with a leading company. Salary: Excellent + Bonus & Bens

David Green

TEK Personnel Consultants
4th Floor, Broadstone House, Broadstone Rd. Stockport, SK5 7DL United Kingdom
Phone: +44(0)161 975 0321
Email: davidgreen@tekpersonnel.co.uk
WEB: <http://www.tekpersonnel.co.uk>

BUSINESS MANAGER

Job Location: USA, MS Stennis

Successful candidate will assist the Division Manager in the day-to-day operations with the contract at the National Data Buoy Center in Stennis, MS. Will assist in establishing objectives, plans and budgets; assist in managing the operational, financial and technical performance of the organization.

Education: Bachelor's degree in related field with an advanced degree desired and seven or more years of increasingly complex operational assignments, including three or more years of supervisory experience. Required Skills: Demonstrated ability to effectively manage or assist in managing a division, and motivate and direct technical and staff personnel.

Jodi Finn SAIC
Email: finnj@saic.com
WEB: <http://www.saic.com>

COMMERCIAL MANAGER

Job Location: USA, WA Seattle
MUST BE US CITIZEN, FUGRO EMPLOYEE OR POSSESS VISA AUTHORIZING WORK IN THE USA.

General Position Summary: The Commercial Manager is responsible for development, bidding, and commercial administration of FSSI projects. This requires constant contact with existing and potential clients with the purpose of expanding FSSI's regional and international market share of the marine survey, research and development, and data management industries.

Essential Functions:

- Review and respond to Request for Quotations (RFQs), coordinating all contract budgeting, proposal preparation, and contract negotiations for FSSI.
- Assume daily responsibility for compliance with terms and conditions of all contracts.
- Oversee all US and international business authorizations including import/export procedures and requirements, survey and vessel permitting, customs and clearance of FSSI equipment and personnel.
- Maintain direct and frequent contact with existing and potential international clients
- Maintain commercial and marketing communications within the Fugro Group of companies and develop FSSI's role in supporting and utilizing the Fugro network.
- Coordinate FSSI's roll in joint Fugro Group business endeavors.

Additional information at: www.seafloor.com
Carrie Higley-Krowka
Fugro Seafloor Surveys
2727 Alaskan Way - Pier 69
Seattle, WA 98121 USA
Phone: 206-441-9305
Email: hr@seafloor.com
WEB: <http://www.seafloor.com>

DATA SYSTEMS DEPARTMENT MANAGER

Job Location: USA, MS Stennis

Data Systems Department includes 25 computer professionals supporting data processing, software development, hardware, networks, software management and upgrades. Position is a full-time technical manager and supervisor for all Department activities. Maintain a close liaison with customer Technical Monitors and Branch Chiefs to assure effective use of resources. Manage all tasks issued to Department, with accountability for cost, schedule, and technical performance.

MS or BS in Mathematics, Computer Science, Information Systems, or related discipline, with a total of 10 years experience, at least 5 of which include managing programming and data processing personnel.

Experience required in management of scientific and business data processing applications in an operational environment.

Familiarity with database management, data acquisition, processing systems design, integration, and operation is required. Must be familiar with all aspects of end-to-end data handling interfaces required to deliver quality data products in real time from data acquisition systems on unmanned, remote platforms. Must have strong knowledge of Carnegie Mellon University Software Engineering Institute processes. Expertise in technical writing required.

Knowledge of C, C++, Oracle, Unix, Perl, and Web publishing technology desirable. Knowledge of Common Approach to Software Development and Maintenance (CASDM) desirable. Working knowledge of MS Project desirable.

Jodi Finn SAIC
Email: finnj@saic.com
WEB: <http://www.saic.com>

ELECTRICAL & INSTRUMENTATION

Job Location: Singapore, SG

Senior Design Engineers (Electrical & Instrumentation). Successful candidates are required to lead a team of engineers and draughtsmen in the design and engineering of the repair and conversion of vessels, for the electrical and instrumentation discipline. He is the overseer of projects assigned to him, assisting the Engineering Manager and Technical Manager in the planning and execution of these assignments.

- Pre-requisites
- Degree in Electrical Engineering or equivalent
 - Min. 8 yrs experience in marine & offshore electrical / instrumentation design works of which at least 3 years in a senior design engineer position or similar
 - Familiar with Statutory and Classification Society Rules and Regulations such as SOLAS, NORSOK, USCG, ABS, DNV, LRS, NK, etc.
 - Good working knowledge of Autocad, Tribon, Microsoft Visio and other engineering analysis packages
 - Possess good leadership and team building qualities with strong communication skills and able to cope in a fast-paced environment

Candidates without the minimum experience may also be considered for corresponding junior positions.

Email: christina@ultrastr.com.sg

ENGINEER I OR II

Job Location: USA, MA Woods Hole

The Woods Hole Oceanographic Institution is seeking a skilled, energetic electronics designer to be part of a seafloor research group. You will be part of a team developing and operating seismic instrumentation deployed from research ships throughout the world. You will perform significant design tasks related to ocean bottom instrumentation and support equipment and lead the implementation of these designs in a seagoing environment. You will be expected to perform, for example, circuit design and development, system integration, battery design, and embedded software creation using current CAD and software tools. Sea Duty required. For a detailed job description and to apply online, please visit <http://jobs.whoi.edu>.
EOE/M/F/D/V
Recruiter
Woods Hole Oceanographic Institution
Human Resources Office, MS#15
Woods Hole, MA 02543 USA
Email: employment@whoi.edu
WEB: <http://jobs.whoi.edu>

ENGINEERING SUPERVISOR

Job Location: USA, MS Stennis

The Science Applications International Corporation (SAIC) ESO Operation seeks an experienced Marine Systems Engineer for its National Data Buoy Center at Stennis, MS. Individual must possess expertise as electron-

ic systems engineer with hands-on experience in marine engineering, project scheduling management, resource management, budgets, design, development, testing and documentation of electronic systems for measuring and reporting remote meteorological and oceanographic data. This position requires a BS in electronic, mechanical or aerospace engineering. Must have 4+ years in electronic systems engineering with 3+ years of leadership or supervisory experience. They also need project management experience, in particular experience developing project plans (e.g. schedules, staffing, technical approach, etc) and managing design projects.

Jodi Finn SAIC
Email: finnj@saic.com

FIELD SERVICE ENGINEERS/ TECHNICIANS

Job Location: USA, LA New Orleans

Kongsberg Maritime, Inc. is experiencing an increase in sales and need to strengthen our service organization in New Orleans, La. to better serve our customers.

Kongsberg Maritime Inc. offer positions as: Field Service Technicians/Engineers:

- Requirements:
- Education within professions as computerized control systems, electronics, software/programming, instrumentation or nautical science.
 - Knowledge of Dynamic Positioning Systems and/or Automated Vessel Control Systems would be an advantage.
 - Customer/Service minded attitude. You should have an outgoing personality and enjoy working for and with demanding customers.
 - Possibility and willingness to travel, sometimes on short notice especially in the GOM region for service on delivered systems and installation of new systems.

Kongsberg Maritime Inc. employee benefits include attractive 401k plan, health insurance and competitive salaries.

Visit our web site www.kongsberg.com for more information about our company and products. Kongsberg Maritime is an equal opportunities employer. All positions available immediately. Please send an e-mail with your resume and referring job title to:

Nils Even Urkedal: neu@kongsberg.com or
Tracy Percle: tracy.percle@kongsberg.com
Kongsberg Maritime Inc.
125 James Drive West, Suite 110
Saint Rose, LA USA 70087
Phone: 504 712 2799
Fax: 504 712 7986
Email: neu@kongsberg.com
WEB: <http://www.kongsberg.com>

FIELD SERVICES MANAGER (INSTALLATION/DEPLOYMENT)

Job Location: USA, CO Engwood

Jeppesen, a Boeing subsidiary and the world's leading provider of aeronautical data, is looking for a Field Services Manager (Installation/Deployment) in its' Jeppesen Marine division. Jeppesen Marine is focused

on providing the marine market with similar digital navigation and information solutions as in aviation.

Jeppesen Marine has been chartered with the same underlying values that launched Jeppesen in 1934 - improving safety and efficiency through innovative navigation solutions. Jeppesen is in a strong position to bring proven technologies and solutions from the highly advanced aviation markets to marine markets.

Essential Functions:

- Intimate knowledge of marine electronics and how to install/integrate with other onboard electrical/electronic systems.
- Ability to work effectively with both customers and dealers. Provide technical support to the on-going business.
- Project management experience and the ability to effectively manage system deployments.
- Ability to develop and write key installation and integration instructions. Develop FAQ's. Must have excellent writing skills.
- Develop training programs for customers, dealers and Jeppesen's internal support organization.
- Develop and implement Train the Trainer program for our customers on how to install and troubleshoot the applications and data.
- Excellent presentation skills.

The ideal candidate will have a minimum of five (5) years experience in integrating software systems with electronic systems.

See our full job description on the Jeppesen

Website. To apply for this position, please follow the link below:

<http://www.recruitingsite.com/csbsites/jeppesen/careers.asp>

Jeppesen is an Equal Opportunity Employer.

Judy Bell

Jeppesen Marine

55 Inverness Drive East

Englewood, CO 80112 USA

Phone: 303-799-9090

Fax: 720-489-3858

Email: judy.bell@jeppesen.com

WEB: <http://www.jeppesenmarine.com>

GEOPHYSICAL DATA ANALYST

Job Location: USA, WA Seattle

MUST BE US CITIZEN, FUGRO EMPLOYEE OR POSSESS VALID VISA FOR RESIDENT/WORK IN THE USA.

General Position Summary: The Geophysical Data Analyst will work offshore and onshore to process and quality control bathymetric data and seafloor imagery using a suite of Fugro sonar processing software. The candidate will also be responsible for rendering a variety of survey data into industry standard cartographic formats utilizing various CAD and GIS software packages.

- Essential Offshore Functions:
- Assist with 24-hour sonar data processing and chart production.
 - Data management and administration.

WANTED: A used Magscan sonar/magnetometer unit with software, or a Geometrics 880 with Maglog software. Price depends condition and length of cable. 239-989-5914, email G.Kibildis@att.net.



MECHANICAL ENGINEER

Hydroid, the leading producer of autonomous underwater vehicles, seeks a highly qualified, BSME or equivalent, mechanical engineer to support both new development and manufacturing efforts.

Qualifications include more than five years of experience in the design of ocean instruments and/or underwater vehicles; demonstrated proficiency in material selection for underwater applications with corrosion considerations, structural analysis (FEA skills desired), electronics packaging, CAD and solid modeling (AutoCAD and Solidworks), and strong communication skills.

Selected candidate will research, develop, plan, design mechanical and electromechanical products, oversee and coordinate activities involved in fabrication, operation, application, installation, and repair of mechanical or electromechanical products and systems.

Applicants selected will be subject to a government security investigation and must meet eligibility requirements for access to classified information.

Send resume and salary requirements to Hydroid, LLC 6 Benjamin Nye Circle, Pocasset, MA 02559 or e-mail to hr@hydroidinc.com.

Noise Control Engineering, Inc.

Shipboard Noise & Vibration Control

Design ♦ Analysis ♦ FEA

♦ Treatment Selection



Diagnostics ♦ Testing ♦ Underwater Noise

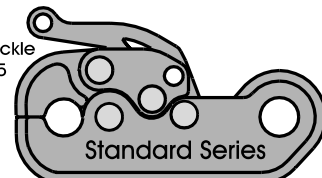
978-670-5339 • Fax 978-667-7047

799 Middlesex Turnpike • Billerica, MA 01821

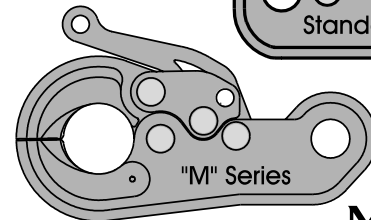
www.noise-control.com • nonoise@noise-control.com

SEA CATCH TOGGLE RELEASE

Standard design for shackle release. Models from .65 to 600 ton SWL.



Standard Series



"M" Series

New "M" Series for release of line or cable.

McMillan DESIGN, INC

jmcmillan@seacatch.com

Tel: (253) 858-1985

www.seacatch.com

Fax: (253) 858-1986

The Future is Now!

The Gorski Hat



www.g2000ss.com • 281-960-5091

- Preliminary chart production.
- Vessel mobilization and de-mobilization.

Education and Experience:
B.A./B.Sc. or higher in geology, oceanography, marine engineering, or related field. Interest and experience in oceanographic processes and data analysis a plus. Experience with data processing and/or cartography is advantageous.

Company: Pioneering research and proven development of advanced technology make Fugro Seafloor Surveys, Inc. (FSSI) an industry leader. Our expert technical team offers a wide range of skills used to develop cost- and time-effective solutions for specific projects. Carrie Higley-Krowka
Fugro Seafloor Surveys, Inc.
2727 Alaskan Way - Pier 69
Seattle, WA 98121 USA
Phone: 206-441-9305
Email: hr@seafloor.com
WEB: <http://www.seafloor.com>

IT PROFESSIONAL

Job Location: USA, MA Marion

Growing company in the field of operational oceanography seeks an IT Professional. Horizon Marine, Inc. seeks an IT professional to support a team of oceanographers. Horizon Marine has been providing oceanographic data collection and analysis services

to the offshore industry since 1982. The staff member has primary responsibility for managing the company's desktop, server, database, network, and communications infrastructure.

Required Experience/Education:
B.S. in physical or computing sciences; System administration; and SQL, Matlab, Javascript, and PHP application development.

Desired Experience or Interests:
GIS application development; Marine sciences, weather forecasting, sailing. Submit resume to Horizon Marine, Inc., 15 Creek Road, Marion, MA 02738; or send via email to horizon@horizonmarine.com. James Feeney, Horizon Marine, Inc. 15 Creek Road, Marion, MA 02738 USA Phone: (508) 748-1860, Fax: (508) 748-1525 Email: horizon@horizonmarine.com WEB: <http://www.horizonmarine.com>

MARINE AND COASTAL RESOURCES MANAGEMENT ANALYST

Job Location: USA, DC Washington

The Congressional Research Service (CRS) seeks a policy analyst to work as part of a team of analysts in the CRS Resources, Science, and Industry Division. Duties include preparing objective, non-partisan analytical studies and descriptive and background

reports on issues of national or international significance; providing personal consultation and assistance to congressional committees, Members, and staff on public policy issues throughout the legislative process; and planning and participating in or leading team research projects and seminars.

This position is being offered at the GS-14 level (\$91,407 - \$118,828); promotion potential is to the GS-15 level (\$107,521 - \$139,774). To apply online (preferred), visit <http://www.loc.gov/crsinfo> or call (202) 707-5627 to request an applicant job kit. Please refer to vacancy #060125 in all correspondence. Applications must be received by May 31, 2006. CRS is the public policy research arm of the U.S. Congress and is fully committed to workforce diversity. Shaunetta Workman
Congressional Research Service
101 Independence Avenue, SE
Washington, DC 20540
Phone: 202-707-6324
Email: sworkman@crs.loc.gov
WEB: <http://www.loc.gov/crsinfo>

MARINE TECHNICIAN

Job Location: USA, WA Seattle

General Position Summary: The responsibility of the Marine Technician involves a wide range of specialized technical skills regarding

FSSI engineering, navigation and technical administration, to include assembly, operation, repair, maintenance, and mobilization/demobilization of the company's survey equipment. The incumbent also provides technical support on survey system development projects.

Education and Experience:

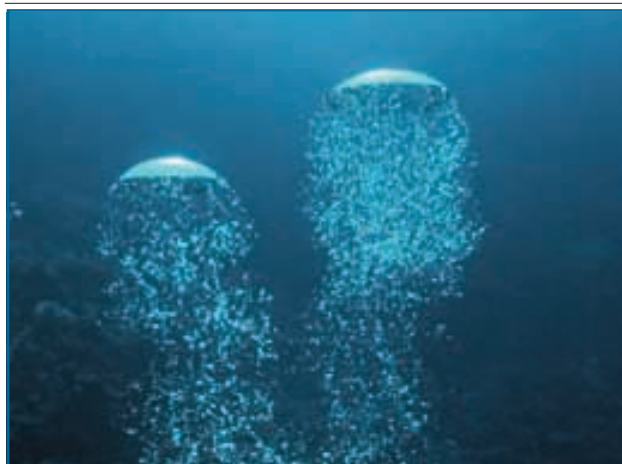
- Two years of college or technical school preferred.
- 5+ years experience in a technical discipline involving troubleshooting and maintenance.
- Seagoing experience preferable, however not necessary.

Carrie Higley-Krowka
Fugro Seafloor Surveys
2727 Alaskan Way - Pier 69
Seattle, WA 98121 USA
Phone: 206-441-9305
Email: hr@seafloor.com
WEB: <http://www.seafloor.com>

MECHANICAL ENGINEER

Job Location: USA, MA Pocasset

Hydroid, the leading producer of autonomous underwater vehicles, seeks a highly qualified, BSME or equivalent, mechanical engineer to support both new development and manufacturing efforts. Qualifications include more than five years of experience in the design of



www.oceanbusiness2007.com



The ocean technology training and procurement forum
National Oceanography Centre, Southampton, UK • 27-29 March 07



A hands-on ocean technology exhibition incorporating in-classroom and on-water demonstrations and training sessions

For information on reserving your exhibition stand and training sessions:

Contact Versha Carter
Telephone +44 (0)1453 839228
Email versha.carter@intelligentexhibitions.com

Organised by:



In partnership with:



Hosted by:



Visit www.maritimeequipment.com/mt & Click No. 211

ocean instruments and/or underwater vehicles; demonstrated proficiency in material selection for underwater applications with corrosion considerations, structural analysis (FEA skills desired), electronics packaging, CAD and solid modeling (AutoCAD and Solidworks), and strong communication skills. Send resume and salary requirements to Hydroid, LLC 6 Benjamin Nye Circle, Pocasset, MA 02559 or e-mail to hr@hydroidinc.com.
Human Resources
HYDROID, LLC
6 Benjamin Nye Circle
Pocasset, MA 02559 USA
Phone: (508)563-6565
Fax: (508)563-3445
Email: hr@hydroidinc.com
WEB: <http://www.hydroidinc.com>

MECHANICAL EQUIPMENT SUPERVISOR

Job Location: USA, TX Houston

No sector of the oil and gas service industry benefits greater from the advance of technology than companies operating in the geophysical services sector. On the cutting edge of that technology is VERITAS DGC Inc., offering the oil and gas industry a comprehensive suite of integrated geophysical services designed to manage exploration risk and enhance drilling and production success worldwide. These services include seismic survey planning and design, seismic data acquisition in all environments, data processing, data visualization, data interpretation, reservoir characterization, data archiving and extensive non-exclusive seismic data library surveys worldwide. With over 36 years of operating experience, more than 3,000 employees in 19 countries on six continents, Veritas is one of the world's leading providers of advanced geophysical technologies. Veritas Marine Acquisition currently has an opportunity for a Mechanical Equipment Supervisor based out of the Houston office. Requirements: Qualified candidate will have 5 - 10 years experience. 4 year Mechanical Engineering Degree or equivalent. Prior experience as Chief Mechanic or Operations Supervisor. Knowledge of rigging aspects of seismic operations. Experience operating, servicing and trouble-shooting vessel equipment. Previous management experience and good communication skills needed. Salary to 85K
Interested candidates may send their resume via email vgohr@veritasdgc.com or via fax to (832) 351-8721
Please feel free to visit our website at <http://www.veritasdgc.com>.
Veritas is an equal opportunity employer.
Trena Gipson
Veritas Geophysical Corporation
10300 Townpark Drive
Houston, Texas 77072
Houston, TX 77072 USA

Phone: 832-351-8047
Fax: 832-351-8721
Email: vgohr@veritasdgc.com
WEB: <http://www.veritasdgc.com>

OCEANOGRAPHER

Job Location: USA, MA Marion

Growing company in the field of operational oceanography seeks oceanographer Experience & Skills Desired:
B.S. required, M.S. or Ph.D. desired, in

www.seadiscovery.com

oceanography, preferably physical Experience and interest in field work at sea Excellent oral and written communications skills
Successful candidate will be required to analyze data, write reports, prepare proposals, and communicate with clients
Must be willing to travel
Salary to commensurate with experience. Send resume to: Horizon Marine, Inc., 15 Creek Road, Marion, MA 02738
horizon@horizonmarine.com

James Feeney, Horizon Marine, Inc.
Phone: (508) 748-1860; Fax: (508) 748-1525
Email: horizon@horizonmarine.com
WEB: <http://www.horizonmarine.com>

OFFSHORE ASSURANCE SUPERINTENDENT

Job Location: USA, TX Houston

Offshore Assurance Superintendent Houston, TX. BP is one of the largest oil and gas producers in America and is a major player in petroleum exploration and production around the world. If you are someone who is driven to make a difference, to prove yourself and ready to make a move in your career, BP is the place for you. BP is currently seeking a: Offshore Assurance Superintendent. A detailed job description and application process can be viewed online: www.bp.com/careers/us, click on "Experienced Hires," then click "Search by job number" and enter the specific job #6765 in the keywords/job ID field. The successful applicant must submit and pass a drug screening test prior to employment and may be required to participate in a random drug-screening program. BP is an Equal Opportunity Employer. BP Recruiter BP
Email: na@na.com

PROPOSALS ENGINEER / PROPOSALS LEADER

Job Location: United Kingdom, County Durham

A major international Subsea Contractor is seeking an experienced engineer to help manage the bids and proposals division of the company. Ideally you will have a Degree (though not essential) and be a competent Microsoft Project and Office Suite user with 2-3 years commercial experience, preferably either within the offshore Telecom's or Oil & Gas industries.
Salary / Rate: Very Good+ Bens, Bonus & Relocation

David Green
TEK Personnel Consultants
4th Floor, Broadstone House, Broadstone Rd. Stockport, Manchester, SK5 7DL UK
Phone: +44(0)161 975 0321
Email: davidgreen@tekperssonnel.co.uk
WEB: <http://www.tekperssonnel.co.uk/>

ROV PILOT TECHNICIAN, DIVERS AND MARINE ENGINEERS

Job Location: United Kingdom, London

The required personnel will work as expatriate support staff in the St. Fergus Terminal (UK) on sub sea operation and inspections etc.
George Brown
Quest Technical Limited

Barton House, 73 Rydens Road, Walton on Thames, Surrey KT12 3AL, UK London, +4401 United Kingdom
Email: questtechnicalgb@yahoo.co.uk

SEAGOING ELECTRONICS ENGINEERING TECHNICIAN

Job Location: USA, WA Seattle

MUST BE US CITIZEN, FUGRO EMPLOYEE OR POSSESS VALID VISA FOR WORK AND RESIDENCE IN THE US

General Position Summary: The Seagoing Electronics Engineer provides technical support on survey system development projects and is responsible for assembly, operation, repair, maintenance, and mobilization/demobilization of the company's survey equipment.

Essential Functions:

- Provide technical support on systems development projects.
 - Identify improvements, plan, design, and test new and existing technology and survey equipment.
 - Maintain or refurbish all field electronic and mechanical survey systems to include proper calibration, testing and certification prior to deployment to the field; and maintenance of adequate equipment and spares stock levels.
 - Conduct light construction activities and utilities' maintenance coordination.
 - Safely pack and stow equipment in preparation for transport.
- Education and Experience:
- B.Sc. in Electronic Engineering Technology or higher.
 - 5+ years experience in electronic troubleshooting and maintenance.
 - Seagoing experience preferable, however not necessary.

Carrie Higley-Krowka
Fugro Seafloor Surveys, Inc., 2727 Alaskan Way - Pier 69, Seattle, WA 98121 USA
Phone: 206-441-9305
Email: hr@seafloor.com, www.seafloor.com

SERVICE ENGINEERS (OFFSHORE)

Job Location: United Kingdom, Cambridgeshire

A leading subsea cable manufacturer is seeking engineers with experience of working offshore in the Oil and Gas and / or subsea cable industries. As a minimum you should have ONC in electrical or mechanical engineering, be able to work from diagrams and have experience of High voltage Electrical and / or fibre optics / Hydraulic systems in an offshore environment. The main purpose of the role will be to deal with the mechanical, pneumatic, hydraulic, electrical and fibre optic re-termination of subsea cables and umbilicals in association with the client companies installation teams. Full product training will be provided at the companies state of the art factory in Cambridgeshire and an excellent pay and benefits package is on offer which includes offshore allowances. Offshore survival and medical certification will be required.

Start Date: ASAP
Duration: Permanent
Location: Any
Salary / Rate: Good Basic + Offshore Allowances & Bens

David Green
TEK Personnel Consultants Ltd
4th Floor, Broadstone House, Broadstone Road, Stockport, SK5 7DL
Manchester, United Kingdom
Phone: +44(0)161 975 0321
Email: davidgreen@tekperssonnel.co.uk
WEB: <http://www.tekperssonnel.co.uk>

STRUCTURAL ENGINEER - DIVER

Job Location: USA, NJ Lumberton

An established Structural Marine Engineering/Construction Company located in Lumberton, (South/Central) New Jersey is looking for Structural Engineers with bridge experience, a Professional Engineers License and a minimum of 5 years of related experience. N.B.I.S. certification, underwater inspection capabilities and certified diver a plus. We have immediate openings with an excellent starting salary and benefits package. To apply, mail resume to: P.O. Box 586 Lumberton, New Jersey 08048 or e-mail to: jcastle@wjcastlegroup.com William J. Castle, P.E.
W. J. Castle, P.E. & Assoc., P.C.
693 Main Street, Building B
P.O. Box 586
Lumberton, NJ 08048 USA
Phone: 609-261-2268
Fax: 609-261-3422
Email: jcastle@wjcastlegroup.com
WEB: <http://www.wjcastlegroup.com>

WEB APPLICATIONS PROGRAMMER

Job Location: USA, MS Stennis Space Center

The Science Applications International Corporation (SAIC) ESO Operation seeks an experienced Web Applications Programmer for its National Data Buoy Center at Stennis, MS. Candidate must be able to lead a team in the design, development, maintenance, testing and troubleshooting of software programs for web systems in support of the National Data Buoy Center. Responsibilities include coding and maintenance of scripts, creation of dynamic and static web pages, database and data maintenance, web replication, and to serve as the technical contact backup to other web developers. Must possess a BS in computer science, or computer related field. An MS would be a plus.

Todd Hall SAIC
1 Enterprise Parkway, Suite 300
Hampton, VA 23666 USA
Phone: 757-827-4884
Email: todd.a.hall@saic.com
WEB: <http://www.saic.com/career>

Advertise Your Job Listing HERE!

Listing your "Position Available" in the pages of Marine Technology Reporter and electronically on www.seadiscovery.com delivers a world of talent to your company's doorstep.

For information on a cost-effective ad program contact Dale Barnett at tel: 212-477-6700; fax: 212-254-6271; or e-mail: barnett@marinelink.com

Coming in JULY 2006

Feature: **Underwater Defense:
Port & Harbor Security**
Product: **Offshore Oil & Gas Production Tools**
Directory: **Undersea Defense Products Guide**

July 2006
**Underwater Defense:
Port & Harbor Security**



Coming in SEPTEMBER 2006

Feature: **The Ocean Engineering Edition**
Product: **Salvage Vessels & Equipment**
Directory: **Deck Machinery, Ropes, Cables & Connectors**

Coming in OCTOBER 2006

The 2006 World Yearbook Edition

The World's largest, most informative and data packed edition of the year. This commemorative double edition features our exclusive Annual Forecast & Analysis, as

- Annual Fleet Report, including Newbuild Statistics
- Ports & Harbors Report
- Homeland Security Update
- U.S. Navy Technology Report, including Undersea Defense
- Environmental Report
- PLUS: The Most Comprehensive Directory and Buyer's Guide

Advertiser's Index

For Fast, Free Information from Advertisers visit www.maritimeequipment.com/mt

Company	Page	RSC#	Company	Page	RSC#
Carrillo Underwater Systems	.17	.200	New York State Thruway Authority	.59	.210
CDI Marine Systems Development Division	.9	.201	Ocean Business	.62	.211
Deep Ocean Engineering	.15	.202	Ohmsett	.27	.212
DeepSea Power & Light	.29	.203	RBR Ltd.	.29	.213
Government of Newfoundland & Labrador	.32-33	.204	Seabotix, Inc.	.3	.214
Hafmynd-Gavia Ltd.	.1	.205	Sea School	.17	.215
Hydroid, Inc.	.25	.206	Sohre Turbomachinery	.43	.216
Ixsea	.C2	.207	SubConn	.12	.217
Kongsberg Mesotech Ltd.	.19	.208	TeleDyne - RDI	.11	.218
Massachusetts Maritime Academy	.C4	.220	Tyco Telecommunications	.21	.219
Measurement Technology	.23	.209			

Your Premier Resource for Maritime Training

USCG Approved Training

**See Course
Listings
Below!**



Massachusetts Maritime Academy offers the USCG approved "Advanced Shiphandling Training in Manned-Models" course. This training meets STCW (1995) Table A-11/2 requirements for assessing Management Level (Masters and Chief Mates) deck officers.

Additional Training at Massachusetts Maritime Academy

- OPA-90 QI
- STCW Basic Safety Training
- Proficiency in Survival Craft
- Fast Rescue Boat
- Tankerman PIC
- GMDSS
- 100 Ton Master
- Advanced Shiphandling
- Radar Observer—Original and Recertification
- ARPA
- BRM
- Visual Communications
- Medical Care/PIC
- Vessel Security Courses

Please contact us for complete 2006 schedule

Telephone 508-830-5019 Fax 508-830-5018

www.maritime.edu/cmt