



# CURRENTS

MARCH/APRIL 2006 • VOLUME 29, NO. 2

News from the Marine Technology Society

## Underwater Intervention Conference successful despite change of venue



MTS Board (from left): Bruce Gilman, Jerry Streeter, Daniel Schwartz, Jerry Boatman, Cathy Woody, Karen Kohanowich and Mark Brown (not shown: Ted Brockett and Sandor Karpathy)

Diving Contractors International] and the fast and positive response by the Tampa convention center that allowed us to even have UI 2006. We would especially like to thank our exhibitors for believing in UI and sticking with the conference,” said Drew Michel, ROV chair and co-chair of the conference. Some 1,500 people attended, compared to a norm of 2,000, and 178 exhibitors had booths.

**K**atrina destroyed all prospects of holding the Underwater Intervention Conference at the New Orleans Convention Center. Rescheduled in Tampa, Fla., the conference was much better attended than expected. “We had originally considered skipping it and concentrating on 2007. It was the quick work of Rebecca Roberts [with co-sponsor Association of

### Board overhauls MTS bylaws

A meeting of the MTS Board of Directors resulted in significant recommendations to change the current MTS bylaws so they comply with incorporation law. The review was carried out with legal council. The rewritten bylaws go to the MTS Council for discussion. A link to the bylaws and policies can be found on the

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### WHAT'S NEW?

#### Board sets scholarship challenge, Page 13

Support the next generation of marine technologists.

#### UI Conference photos, Page 8

More photos of conference participants.

#### The latest MTS Journal is online, Page 19

Education is the focus of the new MTS Journal. Read online or subscribe today!

#### Free writing seminar, Page 6

Sections provide member benefits. See Houston Section news.

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## Proposal would lift drilling ban

**I**n its draft drilling plan for 2007–2012, the Interior Department has proposed lifting a ban on oil and natural gas drilling off Virginia’s coast and in an area off Florida in an effort to boost U.S. supplies. About 2 million acres in the Gulf of Mexico could be opened without any special congressional or presidential approval. The other areas would require such approval. More than 85 percent of the waters around the lower 48 states are currently off limits to energy development, including all areas off Virginia.

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## Ocean Policy gets poor overall grade

**T**he nation earned a D+ on ocean policy reform according to the U.S. Ocean Policy Report Card issued in February by the bipartisan Joint Ocean Commission Initiative.

“It’s no secret our nation’s oceans, coasts and Great Lakes are in serious trouble,” said retired Admiral James D. Watkins, co-chair of the Initiative. “This Report Card highlights our concerns about the slow rate of progress toward implementing the necessary reforms and very limited funding support.”

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U.S. Ocean Policy Report Card	
Initial Response to Commission Reports	A-
National Ocean Governance Reform	D+
Regional and State Ocean Governance Reform	B-
International Leadership	F
Research, Science and Education	D
Fisheries Management Reform	C+
New Funding for Ocean Policy and Programs	F

# NOMINATE

## for MTS Awards

For nomination forms, go to the MTS Web page ([www.mtsociety.org](http://www.mtsociety.org)), select Who We Are, then select MTS Awards; or email [mtsdir@erols.com](mailto:mtsdir@erols.com).

### **Nominations must be postmarked no later than June 1.**

Winners receive a framed certificate and recognition in the Oceans 2006 luncheon brochure, the final Oceans program, the bimonthly newsletter *Currents* and industry magazines. The Lockheed Martin Award and the Compass Awards confer additional recognition, including custom-designed plaques.

#### **Compass Distinguished Achievement Award**

Presented to any individual who has sustained a career marked by achievements that have had significant impact on the field of marine science and technology

#### **Compass Industrial Award**

Presented to any legally-operated industrial firm (excluding government and non-profit organizations) that has demonstrated outstanding contributions to marine science and technology

#### **Compass International Award**

Presented to an individual, company or organization for outstanding contributions to the advancement of marine science and technology; open to those from any country or territory outside the United States

#### **Lockheed Award for Ocean Science and Engineering**

Presented to an individual who has demonstrated the highest degree of technical accomplishment in the field of marine science, engineering or technology

#### **MTS Outstanding Committee Award**

Presented to an MTS committee in recognition of activities conducted in advancement of the objectives of the society; open to all MTS professional committees

#### **MTS Outstanding Section Award**

Presented to an MTS section in recognition of activities conducted in advancement of the objectives of the society; open to all MTS sections

#### **MTS Special Commendation Award**

Presented to an individual, group or organization in recognition of outstanding accomplishments leading to significant advances in marine affairs; open to anyone in management, public service and the social science fields

#### **MTS Outstanding Student Section**

Presented to any established MTS student section demonstrating superior performance in the advancement of the society's objectives

#### **MTS Outstanding Service Award**

Presented to an MTS member or member organization in recognition of outstanding accomplishments in fulfilling the objectives and missions of the Marine Technology Society

#### **Nomination for Fellow**

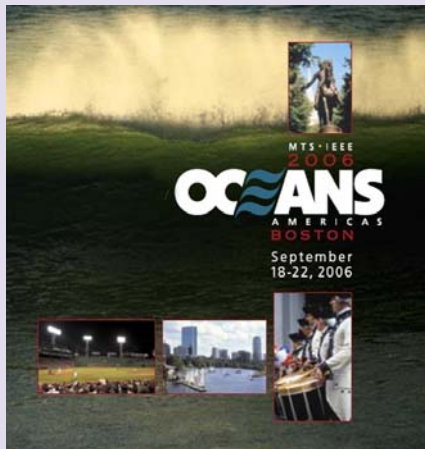
The grade of Fellow is limited to MTS members who have made outstanding contributions to the advancement of the Society's objectives and who have distinguished accomplishments and experience in their professional fields.

## OTC.06—The biggest, the best May 1–4

Reliant Center at Reliant Park  
Houston, Texas  
[www.otcnet.org/2006/index.html](http://www.otcnet.org/2006/index.html)



MTS has an official OTC Technical Program Committee. MTS committees wishing to participate in OTC should contact one of the OTC Technical Program Committee co-chairs, **Sandeep Khurana** at [sandeep.khurana@jpkhouston.com](mailto:sandeep.khurana@jpkhouston.com) or **John G. Bomba** at [jbomba@technip.com](mailto:jbomba@technip.com). If you would like to become a member of this committee, contact either of the co-chairs. A new program for young professionals has been added to the Offshore Technology Conference. "The Next Wave" will feature two panel sessions on May 4, focusing on leadership, career development, involvement in industry associations and entrepreneurial skills. Tickets are included with full OTC registration or one-day registration on May 4. If you are not attending OTC or if you are attending any day other than May 4, tickets are \$30. Seating at OTC for industry breakfasts and topical luncheons is limited, so attendees are encouraged to purchase tickets with their advance reservations. OTC is making room for more vendors with the addition of two new pavilions. These are state-of-the-art, climate-controlled structures that will provide an additional 60,000 square feet of exhibit space and showcase 200 exhibiting companies.



## Oceans 2006—Cool weather, hot topics September 18–21

Hynes Convention Center  
Boston, Mass.  
[www.oceans06mtsieeboston.org](http://www.oceans06mtsieeboston.org)

The deadline has been extended to March 31 for submitting papers to the Technical Committee of the MTS/IEEE Oceans '06 Conference. An Exhibitors Showcase has been added to the conference. At the showcase, registered exhibitors will be able to give product application presentations in a technical session format. Besides a technical program, which will continue to emphasize the traditional core areas of marine science and technology development, the Boston conference plans to highlight several "hot topic" areas. Visit the conference Web site for information on all these developments.

## Underwater Intervention 2007 January 30–February 1

Ernest N. Morial Convention Center  
New Orleans, Louisiana  
[www.underwaterintervention.com](http://www.underwaterintervention.com)

UI returns to New Orleans in 2007. Prospective speakers are invited to submit proposals to the conference in one of the following areas: commercial diving, ROVs, AUVs, sonar, acoustics, underwater inspections, underwater construction/repairs, training/education, legal and regulatory, safety issues, certification, underwater cutting/welding, equipment maintenance, bid specifications and military issues. Deadline for abstract submission is July 15, 2006, and final papers are due December 15, 2006. The conference draws over 2,000 attendees—purchasing agents, project managers, engineers, operations managers, owners, directors and many other key decision makers from the United States and 30 other countries.



Professional members are invited to apply for inclusion in the MTS Experts Directory. This exclusive MTS member benefit provides enhanced visibility for your accomplishments. As an expert, you may be called on to participate in research or talks, or to answer questions from the public. Log in with your Member ID at [www.mtsociety.org](http://www.mtsociety.org) and select Experts Directory from the Members Only page. Inclusion in the directory is contingent upon review by the appropriate MTS vice president and professional committee chair, and at least one MTS Fellow.

## MTS fiscal health positive in FY 2005

Mullen, Sondberg, Wimbish and Stone, P.A., an independent accounting firm, reviewed statements of financial position(s) of the Marine Technology Society as of June 30, 2005, and the related statements of activity and net assets and cash flows for the year then ended, in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. A review consists principally of inquiries of association personnel and analytical procedures applied to financial data.

In fiscal year 2005, the Marine Technology Society maintained positive financial growth. Primary revenue was generated by conferences in general and the Offshore Technology Conference in particular. Investments contributed significantly to income this year. The expenses for the newsletter, *Currents*, and the monthly electronic newsletter, *E-News*, were moved from Publications to Membership, since these publications are considered free member benefits.



MTS bringing you the latest in ocean technology news

### Opportunities... A world awaits you

Delivered monthly to your e-mail box, *E-News* brings you the latest breaking information about opportunities that can help your career. Whether you're interested in finding grants or business opportunities, networking with your peers, or guiding your students toward scholarships, MTS *E-News* will give you the edge. You'll also find information on commenting opportunities and awards, as well as a sample of the many jobs listed in the MTS job bank. A world of opportunities awaits you each month in *E-News*.

**FY 2003, 2004, 2005 Revenue and Expenses**

Revenue	FY 2003	FY 2004	FY 2005
Membership	163,483	195,114	191,493
Conferences	563,995	556,410	537,475
Section/Committees	363,845	340,539	342,160
Publications	42,501	59,380	56,813
Other Income	46,706	52,876	71,398
Scholarship Fund	4,279	3,170	6,411
Unrealized gain (loss) on investments	23,768	159,293	107,758
<b>Total (includes realized gains/losses on sale of investments; and loss on disposal of equipment)</b>	<b>1,204,044</b>	<b>1,366,782</b>	<b>1,315,563</b>
<b>Expenses</b>			
<b>Program Services</b>			
Membership	232,526	xxxxx	xxxxx
(adjusted to be consistent with FY 05)	xxxxx	253,626	293,262
Conferences	18,050	31,316	75,161
Publications	153,332	xxxxx	xxxxx
(adjusted to be consistent with FY05)	xxxxx	74,033	37,095
Sections/Committees	241,525	281,243	330,039
Scholarship	4,543	12,625	6,760
<b>Total Program Services</b>	<b>649,976</b>	<b>652,844</b>	<b>742,317</b>
<b>Supporting Services</b>			
Administration	67,028	99,528	127,958
<b>Total Expenses</b>	<b>717,004</b>	<b>752,372</b>	<b>870,275</b>
<b>Net Increase</b>	<b>487,040</b>	<b>614,410</b>	<b>445,288</b>
<b>Net Assets</b>	<b>2,449,215</b>	<b>3,063,625</b>	<b>3,508,913</b>
<b>Net Assets and Total Liabilities</b>	<b>2,558,732</b>	<b>3,186,822</b>	<b>3,637,745</b>

## In the Spotlight Tyco Telecommunications

**Year the company was founded:** Tyco Telecommunications was responsible for the first transatlantic telephone cable system in 1956. It also developed and implemented the first transatlantic fiber-optic system in 1988.



**Number of employees:** 600  
**Web site:** [www.tycotelecom.com](http://www.tycotelecom.com)  
**Contact:** Victoria Dillon  
**Phone number:** 978-442-5304

**E-mail:** [dillonv@tycoelectronics.com](mailto:dillonv@tycoelectronics.com)

Tyco Telecommunications, a business unit of Tyco Electronics, is an industry pioneer in undersea communications technology

and marine services. Drawing on its heritage of technical innovation and industry-recognized performance, the company delivers reliable, high-quality solutions to organizations with undersea communications needs vital to their core mission. Based in Morristown, N.J., Tyco Telecommunications is dedicated to providing organizations around the world with total solutions and support for undersea optical systems. As a corporate member of MTS, Tyco Telecommunications can have up to 11 employees as MTS members. Frank Cuccio, vice president of Marine Services, is one such member. He says, "Membership in MTS enables me to network with people that share my passion for the sea while building relationships that help the bottom line."

**Welcome new member INTEC Engineering Inc. of Houston, Texas.** With operating offices in Houston, Kuala Lumpur, Delft, Perth, London and Rio de Janeiro, INTEC provides engineering services to the exploration and production, construction, and transportation sectors of the energy industry worldwide. Its areas of technical expertise include marine pipelines and risers, marine terminals, subsea production, floating production and liquefied natural gas, which enable INTEC to play a key role in the development of offshore oil and gas reserves. **Web link:** [www.intecengineering.com](http://www.intecengineering.com)

**Congratulations to Brian Abbott and Marek E. Jasinski.** Abbot is the new chair of the MTS Diving Committee, and Jasinski is taking over the helm of the MTS Marine Archaeology Committee. See page 9.

**MTS member Harbor Branch Oceanographic Institution has received \$250,000** from an anonymous donor to fund renovations for Phase I of a new visitor center and displays illustrating both the institution's research and ocean science in general. The donation is a challenge grant to encourage new donations to the institution. "This new facility is something we've wanted for some time to help us strengthen our connection to the local community," said MTS member **Shirley Pomponi**, Harbor Branch's president and CEO. The new center will be housed in the same building that had been the Harbor Branch Gift Shop. Renovation work is already underway, and the center should open in the fall. Harbor Branch's long-term plan is to expand the visitor center with a new auditorium and additional larger building on land adjacent to the existing building. **Web link:** [www.hboi.edu](http://www.hboi.edu)

**Kudos to MTS member C&C Technologies** for being awarded the 2006 International Achievement Award presented by The International Trade Development Group and the International Center of Lafayette, La. Created to recognize outstanding contributions made to Lafayette's international image and commerce, the award has historically been given to individuals. This is the first year that an entire company has been recognized. **Web link:** [www.cctechnol.com](http://www.cctechnol.com)

**Congratulations to MTS member DeepSea Power and Light** of San Diego, Calif. Its hollow ceramic spheres were selected as one of the top 50 most innovative U.S. products in this year's 11th Annual Product Design and Development Engineering Awards. **Web link:** [www.deepsea.com](http://www.deepsea.com)

**The Ocean Research and Resources Advisory Panel** has a new executive director—Dr. Ken Turgeon.

**MTS member James J. Mermis** has been promoted to president of Superior Offshore International LLC. Mermis is chair of the Houston Section. He joined Superior in February 2005 as chief operating officer after a successful career with Subsea International, Stolt Offshore and Torch.

**MTS member William Pichel** of NOAA presented results from a project called AKDEMO at the ESRIN, the European Space Agency's European Centre for Earth Observation in Frascati, Italy. Researchers from 20 countries discussed the use of Synthetic Aperture Radar (SAR) satellite data on the ocean.

**MTS member David Zilkoski** has been named as the new director of NOAA's Office of National Geodetic Survey (NGS) where he will be responsible for overseeing NOAA's responsibilities for the nation's spatial reference system. Zilkoski moves into the director's chair after serving for the past six years as deputy director.

**MTS member Schilling Robotics** has hired industry-veteran Ron Bernier as sales manager for remote systems. He is based in Schilling Robotics' Houston office. Bernier brings to Schilling more than 15 years of experience in the ROV industry, in positions at Sonsub Inc., Sonsub International, and MTS member **Oceaneering International**.

**MTS member Phoenix International Inc.** is pleased to announce that Information Technology Manager Claudia Deborah Kutzleb has been selected by an independent panel of judges to be a member of the Federal 100 for 2005. The Federal 100 consists of the top 100 executives from government, industry and academia who had the greatest impact on the government information systems community.

**MTS member RESONA/S** got a new CEO and president, as well as a new board of directors after LD Equity 2 acquired the shares of the Steenstrup family. Allan J. Vestergaard has been appointed CEO and president, and Kim Graven-Nielsen is the new chairman of the board of directors.

**MTS member Quest Center**, the New Bedford Economic Development Corporation's marine technology business incubator, has its first occupants: BOT USA Inc. Open since September, the program provides space in a rehabilitated school for young companies. New Bedford is looking to attract companies that have received Small Business Innovation Research grants through the U.S. Navy.

**Congratulations to archaeological oceanographer and MTS member Katherine Croff** of Narragansett, R.I. She has been awarded the \$10,000 Emerging Explorers award from National Geographic. A graduate of MIT and the University of Southampton, Croff is working toward her Ph.D. in archaeological oceanography at the University of Rhode Island's Graduate School of Oceanography. She is involved with developing the university's Sea of Crete Project, providing background research, determining survey routes and working with established archaeologists and oceanographers in the region. Her other research interests include the protection of archaeological material underwater and public education on marine science and exploration.

**A new associate director has been named to the Delaware Sea Grant College Program.** Charles Epifanio is a professor of marine biology-biochemistry at the University of Delaware. The announcement was made recently by Nancy Targett, who took the helm as Sea Grant director and dean of the UD College of Marine Studies in January.

**The oceanographer who helped lead efforts to establish a research program of the Antarctic marine ecosystem** has died. Sayed Z. El-Sayed, 79, died of lymphoma December 21, 2005, at his home on Whidbey Island, Wash. El-Sayed, professor emeritus of oceanography at Texas A&M University, was a driving force behind the establishment in the late 1970s of the International Biological Investigations of Marine Antarctic Systems and Stocks program.

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### Gulf Coast

Bill Teague of the Naval Research Lab at Stennis Space Center gave a presentation on in situ measurements of current meters, acoustic Doppler current profiler's, and wave and tide recorders at the March meeting. Chair Craig Cumbee: [stephen.cumbee@navy.mil](mailto:stephen.cumbee@navy.mil); Web site: [www.mtsociety.org/sections/gulf\\_coast](http://www.mtsociety.org/sections/gulf_coast)

### Hampton Roads

Ray Ban, executive vice president of the Weather Channel, will speak at the April 20 meeting. The Department of Ocean, Earth and Atmospheric Sciences at Old Dominion University has teamed up with NOAA and Nauticus to sponsor the Mid-Atlantic Regional of the MATE ROV Building Competition, held at ODU and Nauticus on April 8. The regional competition brings teams of high school students together with their home-built ROVs to complete a series of underwater tasks. The two winning teams from the Hampton Roads Section's area will move on to the International MATE ROV Competition at NASA headquarters, Houston, Texas, this summer. Volunteers are needed to judge the competition, to be program and team mentors, and to provide technical expertise. Your involvement will help broaden the skills of students and potentially attract some students to ODU. For more information about the Mid-Atlantic Regional MATE ROV competition, contact Krista Trono (Monitor National Marine Sanctuary) at (757) 591-7328, e-mail [krista.trono@noaa.gov](mailto:krista.trono@noaa.gov); or Christine Arrasate (Nauticus@ TNMC) at (757) 664-1019, e-mail [christine.arrasate@norfolk.gov](mailto:christine.arrasate@norfolk.gov). Also, see Education News for more information. Chair Larry Atkinson [latkinso@.odu.edu](mailto:latkinso@.odu.edu); Web site: [www.mtsociety.org/sections/hampton\\_roads](http://www.mtsociety.org/sections/hampton_roads)

### Hawaii

Thirty-two members and guests attended a joint meeting of the Hawaii sections of MTS, PACON International and IEEE in Waikiki. They enjoyed a beautiful sunset between rain showers on the lanai overlooking the ocean. The speaker was Terry White, vice president of operations for the Hawaii Superferry, also known as H-4. Although there have been several attempts to create an interisland ferry system to link Hawaii's main islands, none has been successful. White explained why the Hawaii Superferry will be different, what kinds of ships will be used (including a



*Don Walsh (center) spoke at the February Puget Sound meeting. With him are former MTS President Ted Brockett (left) and Daniel Schwartz, MTS vice president of education and research.*

video of the rapid unloading and loading of passenger, cargo and vehicles) and how the Superferry will make a positive impact on the social and economic well-being of the state. Chair William Friedl: [Bill.Friedl@gmail.com](mailto:Bill.Friedl@gmail.com); Web site: [www.mtsociety.org/sections/hawaii](http://www.mtsociety.org/sections/hawaii)

### Houston

The 8th Annual MTS Sporting Clays Tournament in February at American Shooting Centers was once again a huge success. Despite having to brave frigid temperatures, this year's tournament saw a record 45 teams turn out. The event raised \$8,500 in support of the scholarship fund. The children of Houston Section members may be eligible for a scholarship. See Education News on page 14. A writing seminar will be held April 27. Presented by Evalyn Shea of Shea Writing Solutions, the seminar is free to MTS members and costs \$100 for non-members. Register online at the Houston Section web site. Chair Jim Mermis: [jim.mermis@superioroffshore.com](mailto:jim.mermis@superioroffshore.com). Web site: [www.mtshouston.org](http://www.mtshouston.org)

### Monterey Section

Graham Hawkes will discuss his forecast for the future of undersea vehicles July 5 at 3 p.m. at Monterey Bay Aquarium Research Institute. Hawkes, an internationally renowned ocean engineer/inventor, has designed a significant percentage of all manned (and more than 300 remote) underwater vehicles built for research or industry worldwide. He

has successfully founded and managed six high technology companies, including, most recently, Precision Remotes Inc., which manufactures remote (land-based) systems for the military. Chair Jon Erickson: [jon@mbari.org](mailto:jon@mbari.org); Web site: [www.mtsociety.org/sections/monterey](http://www.mtsociety.org/sections/monterey)

### New England

An all-day workshop for teachers on building ROVs was co-sponsored by the New England Section. Besides introducing teachers to underwater robotics, the program explained how student teams can enter the regional and national ROV competitions organized by the MATE Center. The Quest Center of New Bedford hosted the New England Section meeting in March. Dr. Louis Goodman, professor at the School for Marine Science and Technology, University of Massachusetts, North Dartmouth, presented "The SMAST Turbulence REMUS Vehicle: Science and Applications." The SMAST Turbulence REMUS (T-REMUS) is a modified version of Hydroid Inc. standard REMUS—a low cost, lightweight, autonomous underwater vehicle designed to interface with a Windows laptop computer post-mission to download and analyze data. The April 20 meeting, at 5:30 p.m. in the Woods Hole conference room, will feature Dr. John Boreman, director of Science and Research, National Marine Fisheries Service-New England, who will present the Center's recent activities concerning large shark tagging and the management of data from the field to the public. Chair James Case: [casej@cocom.unh.edu](mailto:casej@cocom.unh.edu); Web site: [mtsne.org](http://mtsne.org)

### Puget Sound

MTS member Don Walsh co-founder of International Maritime Inc., was the featured speaker at the February dinner meeting. His talk, "Lunch Aboard Titanic: Lousy Food and Great Ambiance at 12,500 Feet," covered the history of the Titanic's sinking, the search efforts that located her nearly 70 years later and current diving operations at the site. Walsh made one of those dives in 2002, enjoying a modest box lunch while sitting on the bridge of the ship in a Russian manned submersible. Chair Ron Raymond: [ron@spectrumoffshore.com](mailto:ron@spectrumoffshore.com); Web site: [www.mtsociety.org/sections/puget\\_sound](http://www.mtsociety.org/sections/puget_sound)

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## Section News,

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### San Diego

This year is shaping up to include a full slate of activities. "Acoustic Telemetry in Cultured Marine Finfish: Who's 'Pinging' the Dinner Bell?" was the subject of the talk at the section's February meeting. Mike Shane of Hubbs-SeaWorld Research Institute spoke on surgical methods for implanting acoustic pingers in fish, tracking and monitoring the fish in the wild, and the acoustic properties of pingers. Also scheduled for the first half of the year are cutting-edge presentations on seabed classification and paleo-climate research. **Ed Crenshaw** is continuing to head up the section's efforts supporting relief to J.L. Scott Marine Education Center and Aquarium in Biloxi, Miss. During the January meeting, Glenda Rathwell from Quester Tangent spoke on seabed classification using single-beam and multi-beam echosounders, and side-scan sonar. She discussed the challenges of two recent case studies: in the Salton Sea and in San Francisco Bay. This technology has applications in fisheries research, geological studies and habitat mapping. Chair Leonard Pool: l.pool@sidus-solutions.com; Web site: www.mts-sandiego.org

## Member News,

*continued from page 5*

**The scientist who used satellite measurements to produce the first detailed maps of the ocean's floors** died January 4. William Haxby, 56, an earth scientist at the Lamont-Doherty Earth Observatory at Columbia University, used computers to process data from satellites and other devices to create images detailing the makeup of the ocean bed. In 1983, he created what several ocean scientists described as a "gravity field" map of the world's oceans.

**A new president and CEO** has been named to Hydroid LLC. Christopher von Alt was formerly co-founder and head of the Oceanographic Systems Laboratory and a principal engineer at the Woods Hole Oceanographic Institution.

**The Joint Oceanographic Institutions (JOI)** has named Dr. Kendra Daly as the director of the Ocean Research Interactive Observatory Networks (ORION) Program, and Stuart Williams is JOI's new director of Ocean Observing. Bill Ball also joins JOI as the new director of the Scientific Ocean Drilling Vessel Conversion program.

**NOAA's Office of Space Commercialization** has a new director, Edward M. Morris. Retired Vice Admiral (and MTS member) **Conrad C. Lautenbacher, Jr., Ph.D.**, under secretary of Commerce for Oceans and Atmosphere and NOAA administrator, noted, "Space-based assets play an integral role in meeting NOAA's mission. Ed's extensive background in this arena will be a great asset to NOAA and the space community."

**The Maritime Administration of the Department of Transportation** has a new director. David C. Sanborn previously served as director of operations for Europe and Latin America at DP World.

### **Support Scholarships!**

Help the next generation of marine technologists and engineers.

Donate online at [mtsociety.org/education/donate.cfm](http://mtsociety.org/education/donate.cfm)

## *Welcome, January & February New Members*

### **Eastern Region**

Harold Brundage  
Peter Bryn  
Patrick Courson  
Alexander Efron  
Robert Fritzen, Jr.  
Bjorn Johnson  
Mark Miller  
Chris Roberts  
Tasha Snow  
Arthur Ya  
Harry Zych

### **Europe**

Eunhee Kim  
Manfred Olma  
Nsini Udo

### **Florida**

Nicholas Abruzzini  
Michael Card  
William Dentel

Justin Ryan  
Jeff Scudder  
Bob Vandedrinck  
Christopher Williams

### **Gulf Coast**

Marwin Emert  
Allison Mojzis  
Erick Swenson  
Jennifer Wozencraft

### **Hawaii**

Trenton Martin  
Reid Shizumura

### **Houston**

INTEC Engineering  
Brad Adkins  
Bijay Choudhary  
Cynthia Cleveland  
Jie Fang  
Ashley Frey

Andrea Hughes  
Robert Keith  
Glenn Lanan  
Carroll Lebouef  
Ron Ledbetter  
Arthur E. Linkins  
Brian McShane  
Pieter Meinen  
Paul Miller  
Tasia Newton  
Uri Nooteboom

Roger Osborne  
Douglas Ottens  
Cassie Papp  
Nolan Roberts  
Justin Russell  
Greg Sentell  
David Veatch  
Vince Vetter  
Bill Washington  
Larry Whittenburg  
Gordon Wilkinson

### **Japan**

Osama Niho

### **Los Angeles**

Matthew Miller

### **Monterey**

John Dickinson  
John Ferreira  
Christopher Mabie  
Shinobu Okano

### **New England**

Joseph Caldwell  
Edward Damm  
Kurt Hansen  
David Mitchell  
Mark Rohde  
Thomas Weber

### **Puget Sound**

Austin Harbison  
Ye Li  
Mike MacDonald  
Craig W. Russell  
Ravi Shankar

### **San Diego**

C. David Chadwell  
Ed Morris

### **Southern Region**

Kassy Rodriguez

### **Washington, D.C.**

Cynthia Erickson  
Robert Nicholson  
William Rippey

### **Western Region**

Paul Olsgaard  
Randy Sliester  
Claudio Vera

## UI Conference successful despite change of venue, *continued from page 1*



The MTS booth attracted a trio of MTS luminaries (from left): Daniel Schwartz, vice president of education and research; Dolly Dieter, founder of the Dieter Family Travel Scholarship; and Andy Clark, MTS past president.



MTS member Dynacon was one of 178 exhibitors at UI 2006. The dynamic exhibit hall was busy with traffic throughout the conference.



Chuck Richards (left) congratulates ROV Scholarship winner Kevin Bretney, a freshman at Franklin W. Olin College of Engineering, Mass.



MATE's Jill Zande and Schilling Robotics' Tyler Schilling (right) accepted awards from Drew Michel, UI 2006 chair.



Fact gathering in the busy exhibit hall.

Members Only page at [www.mtsociety.org](http://www.mtsociety.org). In other business, all electronic votes from September through January were acknowledged and Policy 3010, MTS Fellows, was approved as written.

### Zande, Schilling win awards

The ROV Committee Chair's award went to **Jill Zande** of the Marine Advanced Technology Education (MATE) Center for her dedication and hard work with the annual remotely operated vehicle (ROV) competition. "That program has now touched about 2,000 students, showing them that math and science do matter and that there are some careers that can be both fun and profitable," Michel said. The Cor-

porate Excellence Award went to **Schilling Robotics** because, according to Michel, it had the courage not only to execute the management buyout from Alstom, but also to ramp up to become a player in the large work class ROV market.

### Good turnout for Submersibles tract

The third annual Manned Submersibles tract sponsored by the MTS Manned Underwater Vehicles (MUV) committee had a diverse and busy program, with 20 presentations. With a growing international outreach, this year's presenters came from Canada, Costa Rica, France, Japan, the United Kingdom and the United States. **Will Kohlen**, as tract chair and chair of the MTS MUV committee, opened with a condensed overview of more than 80 active submersibles currently operating around the world, followed by an overview of the year by the National Oceanic and Atmospheric Administration's (NOAA's) Office of Ocean Exploration and the U.S. Navy. Many of the presentations will be available as part of the MTS MUV proceedings. Contact Will Kohlen at [will.kohlen@seamagine.com](mailto:will.kohlen@seamagine.com). For a full account of the three-day tract, go to [www.mtsociety.org](http://www.mtsociety.org), select Conferences at a Glance, then scroll to the UI Conference information.



### UI Conference info, photos online

In lieu of proceedings, a list of UI 2006 presentations and the contact information of authors is available online at [www.mtsociety.org](http://www.mtsociety.org). Go to Conferences at a Glance and scroll down to the UI Conference information. Click the Photo Gallery link on the home page to see photos from the conference.

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## Professional committees get new chairs

**Marek Jasinski** and **Brian Abbott** have been elected to chair two of MTS's professional committees. Jasinski will take over the Marine Archaeology Committee from Brett Phaneuf, and Abbott will replace William C. Phoel on the Diving Committee.

Jasinski is professor of maritime archaeology at the Institute of Archaeology and Studies of Religion at the Norwegian University of Science and Technology. He offers seven main goals he would like to achieve as chair, including attracting members from countries other than the United States and Northern Europe. "A special challenge would be to attract and incorporate at least a few young people from developing countries."

Other goals are to establish channels for discussions and innovative forms of cooperation between marine archaeologists and marine salvage companies; to develop an international journal; and to develop dynamic and innovative international cooperation among marine archaeology, marine industry and the U.S. Navy.

Anyone interested in marine archaeology is encouraged to contact Jasinski at [marek.jasinski@vm.ntnu.no](mailto:marek.jasinski@vm.ntnu.no)

Brian Abbott owns Nautilus Marine Group International LLC (NMGI), which works in the area of underwater inspection of marine structures. In 2000, he established the civil engineering diving committee of the Association of Diving Contractors International (ADCI) and served as chairman for five years. During that same period, he has also been director of the Lansing/Jackson chapter of the American Society of Civil Engineers.

"I believe that my diverse background in engineering, geophysics and commercial diving allows me to bring unique perspectives to the committee and lead it into the future," Abbott noted. "Although the relationship between MTS and ADCI is very good, I believe that my past and current association with the ADCI can make the relationship stronger between the two organizations."

MTS members interested in diving should contact Abbott at [abbottc@msu.edu](mailto:abbottc@msu.edu).

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## Ocean Policy gets poor overall grade, *continued from page 1*

One year after the release of the U.S. Commission on Ocean Policy's historic report and more than two years after the release of the Pew Oceans Commission report, some progress on ocean policy reform has been made. However, hundreds of recommendations suggested by the two commissions have not been addressed. The report card assesses the initial reaction to the commissions' reports and assigns grades for actions in 2005.

The Report Card recognizes that progress is being made in a number of regions, including the Great Lakes, Gulf of Maine, Gulf of Mexico, Puget Sound, Northeast and the state level. However, more regions and states need to develop and implement ocean governance mechanisms, and the federal government should develop a national framework to support regional approaches and collaboration.

In the area of international leadership, the Initiative urges the Senate to expeditiously provide advice and consent for U.S. accession to the United Nations Convention on the Law of the Sea. The convention has the support of President George W. Bush and the majority of Congress and is vital to national security, and to economic and international interests.

The Report Card urges the administration and Congress to immediately begin the process of enhancing support for ocean research, including support for social sci-

ences, as well as using oceans to help attract students at all levels to pursue careers in science, engineering and math.

As for funding, the Initiative calls new and sustained investments key to the success of ocean policy reform. The U.S. Commission on Ocean Policy identified the costs associated with each of its 212 recommendations, which would require new funding on the order of \$3.9 billion per year to be shared among the states, tribes and federal government. Key among those costs is the doubling of the federal ocean and coastal research budget (\$650+ million) over the next five years, building an integrated ocean observing system and establishing an Ocean Policy Trust Fund.

MTS members testified at a U.S. Senate hearing and other hearings of the U.S. Commission on Ocean Policy, and the Society was a signatory to a letter to President George W. Bush urging him to articulate a national ocean policy and underlying guiding principles; elevate ocean affairs to the highest policy level and harmonize the work of the many federal agencies involved in oceans; and significantly increase funding for the oceans. To view members' testimony and read the MTS letter, go to [www.mtsociety.org](http://www.mtsociety.org) and select Public Outreach from the News Center menu.

The original policy and report card are at [www.jointoceancommission.org](http://www.jointoceancommission.org).

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## Proposal would lift drilling ban, *continued from page 1*

Under Interior's proposal, the bottom part of the so-called Lease Sale 181 area in deepwater off Alabama and Louisiana would be opened to drilling. But no drilling would be allowed within 100 miles of Florida's coast, including a skinny part of the disputed area known as the "stove pipe." The department also proposed allowing energy exploration in an area in the North Aleutian Basin off the Alaskan coast.

Florida's state and congressional lawmakers are disputing the boundaries in much of the Lease Sale 181 area. The lawmakers wrote a letter to Interior Secretary Gale Norton in response to Mineral Management Service's (MMS's) January 3 is-

suance of seaward boundaries in the federal outer continental shelf. MMS responded to the complaint by saying that the lines will help the organization manage alternative and traditional energy infrastructure development.

Florida legislators are concerned because the new MMS map gives Alabama and Louisiana greater say over energy activities in the Lease Sale 181 area. While Florida legislators are fighting offshore drilling, several other legislators are pushing for "opt-out" options, which would effectively allow states to opt out of offshore drilling bans. Visit [www.gomr.mms.gov/homepg/offshore/egom/sale181.html](http://www.gomr.mms.gov/homepg/offshore/egom/sale181.html) to read the MMS's Lease Sale 181 proposal.

**The MTS professional committees need volunteer commitment—they require your vision and input. A number of the committees are going full speed ahead, while others are in need of fresh ideas. MTS committees exist to keep you connected, reinvigorate interest in your profession and advance your career. Find a committee that matches your interests and get involved today.**

### **Underwater Imaging**

Two main issues were discussed at the committee's January meeting: potential topics for discussion at Oceans 2006 and functions that are of value to members on a new MTS interactive Web site. Potential topics at Oceans 2006 are "Homeland security and its tie to underwater imaging," "Funding opportunities," "New discoveries and the technologies that make them possible," "Underwater Surveillance" and "What role will underwater imaging play in IOOS?" To contribute or participate in a session at Oceans '06, contact Committee Chair **Donna Kocak** at [donna.kocak@mtsociety.org](mailto:donna.kocak@mtsociety.org). UI web site: [mtsociety.org/pro\\_committees/ui](http://mtsociety.org/pro_committees/ui)

### **Oceanographic Instrumentation**

Chair **Sam Kelly** is interested in hearing from anyone who has had experiences with theft and vandalism of ocean instruments. Kelly's MTS students have been working

for almost a year at the Southern California Marine Institute in procuring, testing and deploying the Center for Integrative Coastal Observation, Research and Education (CI-CORE) near terrestrial and ocean deployed systems. When planning for installation, security was considered, but not much thought was given to the buoy instruments except to lock the waterproof instrumentation box and use locks and chains to secure instruments. A current meter has been stolen and vandalism has included opening an instrumentation box and leaving it exposed to flooding by sea water. The problems raise the issue as to the scale of ocean theft and vandalism. Send e-mail to Kelly at [skellycp@aol.com](mailto:skellycp@aol.com).

### **Remote Sensing**

The committee is updating its objectives for the current calendar year and seeks member's recommendations as part of this process. The committee continues to look

for collaborative opportunities with applicable companion organizations, alliances and societies. Its recent activities in this area have involved the highest levels of the MTS leadership and promise to fundamentally alter—in a positive way—the breadth and level of activity within the committee. Also, the committee continues to evaluate alternatives for expanded communications via an RS Committee Web site, including leveraging a current-year MTS initiative to expand the capabilities of the main MTS Web site for the benefit of all members. Planning by the Oceans '06 Conference Committee continues. Air/Space Remote Ocean Sensing is a topic area of emphasis at the conference. See the newly updated Web site at [www.oceans06mtsieeboston.org](http://www.oceans06mtsieeboston.org). Please consider how you might otherwise contribute the value of your unique knowledge, skills and time at this conference. Chair Gary Mineart: [gary.mineart@mitretek.org](mailto:gary.mineart@mitretek.org)

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## Legislative News

**President Bush's fiscal year 2007 budget request of \$8.4 billion** called for funding for the Coast Guard, including \$42.3 million for deepwater logistics support; \$7.2 million to replace obsolete oxygen breathing apparatus aboard ships and training centers with safer self-contained breathing apparatus; \$25.9 million to recapitalize aids-to-navigation nationwide and rebuild or improve aged shore facilities; \$11.2 million to continue procurement plans and analysis for deployment of a nationwide system to identify, track and exchange information with vessels in the maritime domain; \$934.4 million to continue replacing an obsolete fleet of cutters and aircraft; \$24.8 million to begin low-rate initial production to replace 41-foot utility boats and non-standard boats; \$4.7 million to provide additional personnel and transform the prototype Enhanced Maritime Safety and Security Team in Chesapeake, Va., into a Maritime Security Response Team, providing on-call maritime counter-terrorism response capacity, also enhanced maritime counter-terrorism training facilities.

**The U.S. Navy sent Congress an ambitious 30-year shipbuilding plan** that would reverse the decline in the fleet, build it up from the current 285 ships to 315 in five years and sustain it above that number for more than a decade. To make that plan work, the Navy must get its annual ship construction funding up from the proposed fiscal 2007 level of \$9.7 billion to \$13.5 billion in two years, keep it at that level or higher for decades, and get the average cost of its ships down substantially. The plan was required by the Armed Services committees, whose members have complained repeatedly over the years of the rapid drop in the size of the combat fleet. The current fleet is the Navy's smallest since just before World War I.

**In February, the House Science Committee held a hearing** to examine the administration's proposed research and development budget for fiscal year 2007 as it relates to President Bush's American Competitiveness Initiative (ACI). The president has urged the doubling over the

next 10 years of the cumulative budgets of the National Science Foundation (NSF), the Department of Energy's Office of Science and core programs within the National Institute of Standards and Technology. In the fiscal year 2007 budget request, these agencies would receive increases of 8, 14 and 17 percent, respectively. However, in the hearing, committee members expressed concern over proposed cuts to undergraduate and K-12 education programs at NSF (including the Math and Science Partnership [MSP] program). Over the past few years, the budget for NSF's MSP program has gradually declined, preventing new awards. In the fiscal year 2007 budget request, the MSP program would receive \$46 million, a cut of \$16 million from fiscal year 2006. Committee members were virtually silent on the need to promote NOAA within ACI and to restore appropriations, which have declined over the past two years. In the end there was no discussion of these or other ocean-related budget items in the NSF budget request.

## **The Minerals Management Service (MMS) has released its analysis of the effects of Hurricanes Katrina and Rita.**

Analysis of the damage assessment data, along with ongoing research requested by the agency, will be incorporated in plans for future hurricane seasons. MMS estimates that 3,050 of the Gulf's 4,000 platforms and 35,405.5 of the 53,108 kilometers of Gulf pipelines were in the direct path of either Hurricanes Katrina or Rita. Hurricane Katrina destroyed 46 platforms and damaged 20 others. Hurricane Rita destroyed 69 platforms and damaged 32 others. "The overall damage caused by Hurricanes Katrina and Rita has shown them to be the greatest natural disasters to oil and gas development in the history of the Gulf of Mexico," MMS Regional Director Chris Oynes said. Daily production of about 396,000 barrels of oil and about 1.8 billion cubic feet of gas remain shut-in. For a long-term projection, approximately 255,000 barrels a day and 400 million cubic feet of gas a day will probably not be restored to production prior to the start of the 2006 hurricane season. The U.S. Coast Guard lists unmarked marine hazards resulting from last year's hurricanes in its "Local Notice to Mariners." The weekly bulletins suggests that two "Safety Alerts" issued by MMS officials failed to mention dozens of platforms the Coast Guard lists as hazards or missing, and many of the objects have apparently drifted since they were first discovered. **Web links:** [www.navcen.uscg.gov/lnm](http://www.navcen.uscg.gov/lnm) and [www.mms.gov](http://www.mms.gov)

**A major upgrade of the Victory-class semi-submersible Ocean Monarch** (formerly Garden Banks) has been initiated by Diamond Offshore Drilling Inc. The rig will be designed to operate in up to 3,048 meters of water in a moored configuration. The project is budgeted at \$300 million, including capitalized overhead and interest, spares, testing, delivery and mobilization to Singapore. The rig, which is the fourth in a series of fifth-generation Victory-class upgrades that includes the Ocean Baroness, Ocean Rover and Ocean Endeavor, is expected to be ready for service in the fourth quarter of 2008. The Monarch, currently cold stacked in the Gulf of Mexico, is expected to be mobilized to Keppel-FELS Ltd.'s shipyard in Singapore in mid 2006. **Web link:** [www.diamondoffshore.com](http://www.diamondoffshore.com)

**MTS member Bennex is delivering four off-umbilical termination head transformer units** to FMC Technologies Kongsberg Subsea for the Ormen Lange project. The end user is Norsk Hydro. Since the design and engineering phase started in January 2005, FMC and Bennex have overcome great technological challenges on this project. In January 2006, Bennex Kongsberg produced and delivered three of the units. In April, production of the last will start. **Web link:** [www.bennex.no](http://www.bennex.no)

**Fugro-Geoteam AS has been awarded a contract** by the Norwegian company Pertra AS for 3-D seismic surveys in the Norwegian sector of the North Sea. The data will be acquired by Fugro's 3D vessel *Polar Princess*. The seismic data acquisition is scheduled to start mid-March and to be completed in early May. **Web link:** [www.fugro.com](http://www.fugro.com)

**MTS member Impulse Enterprise has added two new members to the Titan range of connectors.** The MKS(W)-3L10 is a 10-contact, wet mateable connector only slightly larger than the existing MKS-310. The MKS(W)-400 series falls between the MKS(W)-300 and MKS(W)-500 in size. Currently, it is available as either a 12 or 19 contact wet mateable connector, although further configurations are planned. O-ring installation tools and procedures are now available for all of the Impulse cable connectors that use the dovetail O-ring. Impulse has added 10, 12 and 16 contact connectors to the Micro Mini wet pluggable range. With this addition, the Micro Mini connectors are now available in nine configurations, with between 2 and 16 contacts. **Web link:** [impulse-ent.com](http://impulse-ent.com)

**MTS member PRIZM Advanced Communication Electronics** has acquired Sias Patterson LLC of Yorktown, Va., a manufacturer of the Fetch Family of AUVs. **Dave Clifford**, Prizm president, said, "The Fetch vehicle combined with our fiber optic telemetry and disposable spoolers will create the ability to deliver real-time information from subsea to sea, land and air." **Web link:** [www.prizminc.com](http://www.prizminc.com)

**The U.S. Coast Guard Office of Ocean Engineering (CG-432) has completed the development of its Viscous Oil Pumping System (VOPS)** based on seven years of

research and testing with the oil spill technology industry, the U.S. Navy Salvage Command and the Canadian Coast Guard. The VOPS is a major improvement of the Coast Guard's existing lightering capabilities based on lessons learned from past lightering incidents, such as the *M/V New Carissa* grounding in early 1999. Using annular water injection technology, the VOPS is capable of pumping the heaviest of fuel oils (i.e., Bunker C) at temperatures in the range of 33 to 36 degrees Fahrenheit at distances up to 457.2 meters. The VOPS basically consists of two Landa pressure washer/hot water generator units, one Desmi DOP 250 lightering pump, one Hydra-Tech water pump, one Highstar hydraulic power unit and a custom-fabricated pump control/monitoring stand, as well as various accessories, such as 15.24-centimeter lay-flat discharge hose and hydraulic hoses. CG-432 intends to outfit each of the three U.S. Coast Guard pollution response teams with the VOPS over the next few years. The first VOPS, which is to be delivered to the Atlantic pollution response team, is to be packaged in two ISU-90 containers by July 2006. **Web link:** [www.uscg.mil/systems/gse/gse2/Team2C.htm](http://www.uscg.mil/systems/gse/gse2/Team2C.htm)

**MTS member Remote Ocean Systems' new LED SmartLIGHT** uses new solid-state technology to produce an intense light output using a low-voltage power source. The elimination of a traditional filament and bulb makes this light extremely robust and shock resistant, with a 50,000+ hour illumination life. The LED SmartLIGHT's design allows it to be daisy chained into an RS-485/RS-232-controlled network, with the capability of independent control and dimming of multiple lights, and control of other components (i.e., cameras and pan-and-tilts). **Web link:** [www.rosys.com](http://www.rosys.com)

**The PRO III XE GTO is the latest model in the Pro line of MTS member VideoRay.** It includes the submersible, integrated control box, 76 meters of tether on Tether Deployment System reel, manual; two watertight, rolling Pelican cases; and tool kit. It is depth rated to 152 meters. Standard features include high-thrust GTO props; on-screen data display; black-and-white, ultra-low-light, rear-facing camera with LED light

*continued on page 12*

array; audio annotation system; and an integrated control box. The Pro III XE GTO is also PC computer control enabled, allowing operators to control the Pro III XE using included wired or wireless game controllers with a user-supplied laptop computer. **Web link:** [www.videoray.com](http://www.videoray.com)

**MTS member C&C Technologies recently completed several deepwater AUV hazard surveys** for BP off the coast of West Africa. The surveys, in Block 15, 18 and 31, encompassed over 7,500-line kilometers and were completed with the C-Surveyor I™ AUV. The C-Surveyor IAUV was commissioned in January 2001 and has completed over 48,000 kilometers of surveys to date. **Web link:** [www.cctech.com](http://www.cctech.com)

**Total has increased its contract with FMC Technologies** for the Rosa project to include an additional five subsea trees, including well jumpers. This amendment has an approximate value of \$27 million in revenue for FMC Technologies. FMC Technologies' original scope of supply for the Rosa project included 18 subsea trees, manifolds, production controls and associated systems. Delivery of the additional equipment is scheduled for the first quarter of 2007. The Rosa field is located in offshore Angola Block 17, in water depths ranging from approximately 1,300 to 1,500 meters, and is about 15 kilometers from the Girassol Floating Production, Storage and Offloading (FPSO) system to which the development will be tied back. **Web link:** [www.fmctechnologies.com](http://www.fmctechnologies.com)

**MTS member Nautronix has signed a multi-million dollar contract** with Keppel FELS Ltd. in Singapore for the supply of systems for their new construction for ENSCO International Inc. The ENSCO 8500 is an ultra-deepwater semi-submersible drilling rig. The scope of supply includes Nautronix NMS6000 multi-station Class 2 Dynamic Positioning System, Thruster Controls and Vessel Management System, as well as associated environmental and position reference sensors. Nautronix will also supply its Dual NASDrill RS925 multi-hydrophone LBL/SBL Acoustic Positioning System. Delivery of equipment will be for the end of 2006 with commissioning due in 2007. **Web link:** [www.nautronix.com](http://www.nautronix.com)

**MTS member JDR Cable Systems was awarded the contract** to design, manufacture and test two composite power cables required to control two jacket platform-based wind turbines. Talisman Energy (UK) Ltd. and Scottish and Southern Energy, co-venturers in the Beatrice Demonstrator Project, awarded the contract. The turbines will be linked back to the Talisman-operated Beatrice Platform in the U.K. North Sea. The two composite bundles (970 meters and 1,920 meters long) each comprise three phase 70mm<sup>2</sup> 33kV power cores, data cables, back-up power cables and fiber optic communication cables. The bundles were engineered to give the smallest diameter while still maintaining the strength and weight required to suit the field installation and service conditions. The termination package includes JDRs in-house developed-and-designed high-strength flexible pull-in head. **Web link:** [www.jdr cables.com](http://www.jdr cables.com)

**BP Limited UK has extended a three-year frame agreement with MTS member Aker Kvaerner Subsea** for the supply of steel tube umbilicals. The agreement was extended by two years, to 2007. Aker Kvaerner Subsea will continue to provide project management, engineering and manufacturing of steel tube umbilicals. Lundin Netherlands B.V. Succursale de Tunisie has awarded Aker Kvaerner a contract for marine operations in conjunction with deployment of the Floating Production, Storage and Offloading (FPSO) *Ikdam* to the Oudna field offshore Tunisia. The contract value is about \$14 million. Maersk Contractors has awarded Aker Kvaerner Subsea a contract to deliver two deepwater drilling risers. The contract is valued at \$32 million. **Web link:** [www.akerkvaerner.com](http://www.akerkvaerner.com)

**Geoconsult AS has recently exercised its purchase option** for one additional 150-horsepower Triton® XLS system from MTS member **Perry Slingsby Systems** (PSS). Triton® XLS18 will be the fourth in a series of systems scheduled for delivery in early 2006. Triton® XLS18 will include an advanced high-specification survey capability and enhanced thrust output. The system will be configured as a mobile system. The Triton® XLS11 has completed factory-acceptance testing. It is the first of four systems scheduled for delivery in 2006 and will be permanently installed on the vessel *Geoholm*. A Chinese client has recently purchased an

Olympian Class WROV. Depth rated to 3,500 meters, the Olympian 5 will interface with PSS' previously supplied tether management system, umbilical-and-electric-heave-compensated deployment winch and surface-control system. The Olympian 5 WROV will be used for survey tasks and to deploy tooling for sampling the seabed for methane hydrate deposits in the South China Sea. **Web link:** [www.perryslingsbysystems.com](http://www.perryslingsbysystems.com)

**The Geospatial-Intelligence Agency has awarded firm, fixed-price contract** modifications to DigitalGlobe of Longmont, Colo., Space Imaging of Thornton, Colo., and ORBIMAGE of Dulles, Va., for high-resolution commercial satellite imagery. The awards to DigitalGlobe and Space Imaging are for \$24 million. The award for ORBIMAGE is for \$12 million. **Web link:** [www.nga.mil/portal/site/nga01](http://www.nga.mil/portal/site/nga01)

**The Port of New Orleans could be back up to 70 percent of its previous volume** of shipping by the second quarter of 2006, according to Port Director Gary LaGrange. Before Hurricane Katrina crippled the port, it was receiving about 40 ships per week. Three months later, approximately 20 ships were calling. There are many issues still facing the port's recovery. The port damage was estimated at \$100 million, and LaGrange said that 30 percent of the port no longer exists.

**Woods Hole Group has been awarded a new multi-year, multi-task purchase order** with NOAA for National Environmental Field Services. The initial task order awards include the annual routine maintenance of the New York/New Jersey Harbor Physical Oceanographic Real-Time Systems (PORTS®), a reconnaissance survey of the sites, the production of a preliminary station configuration sketch and a detailed cost estimate for the installation of new National Water Level Observation Network (NWLON) stations to support storm-surge measurement requirements for the Chesapeake Bay. The NOAA national award allows Woods Hole Group to provide further support to NOAA for the installation, operation and maintenance of its existing operational data collection programs. Woods Hole Group is the O&M contractor for Delaware River and Bay, Chesapeake Bay, and Narragansett Bay PORTS®. **Web link:** [www.whgrp.com](http://www.whgrp.com)

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**The potential long-term business opportunity in wave and tidal energy** could be worth at least \$1 trillion to European industry, according to an energy analyst from Douglas-Westwood who gave the keynote address to the second French-British seminar on Marine Renewable Energy in Le Havre, France. The analyst likened the business opportunity to that of Airbus. **Web link:** [www.dw-1.com](http://www.dw-1.com)

**Chevron USA has started construction of a floating production facility** for installation in the Tahiti Field, located 190 miles south of New Orleans. Tahiti will be developed from two subsea drill centers producing to a floating production facility supported by a truss spar. The subsea centers will be located near the two Tahiti appraisal wells. One of the appraisal wells encountered more than 304.8 meters of net pay, one of the most significant net pay accumulations in the history of the deepwater Gulf of Mexico. **Web link:** [www.chevron.com](http://www.chevron.com)

**Helix Energy Solutions Group (formerly Cal Dive International) will pay \$1.4 billion for Dallas-based Remington Oil and Gas Corp.,** which has assets in offshore waters that mainly produce natural gas. The deal is expected to close by midyear. The Remington deal will double Helix's 2006 production to 250 million cubic feet of gas equivalent per day. But Helix cited Remington's potential for reserve growth and its 3-D seismic data covering 4,000 blocks in the Gulf of Mexico as a big incentive. **Web link:** [www.helixesg.com](http://www.helixesg.com)

**Hydroid LLC has announced that NAVSEA has recently exercised options** awarded to Hydroid in 2003 to design and fabricate a prototype system. The modified REMUS 100 vehicle will be used for Search-Classify-Map (SCM) by U.S. Naval forces in conducting Very Shallow Water Mine Countermeasures (VSW MCM) operations. The custom configuration, named "Swordfish," will be capable of performing low-visibility VSW exploration and reconnaissance in support of amphibious landing, MCM operations and hydrographic mapping in the very shallow water zone. Hydroid will be delivering two Swordfish systems, consisting of six vehicles and supporting equipment and spares, to the Naval Explosive Ordnance Disposal Technology Division in 2006. **Web link:** [www.hydroidinc.com](http://www.hydroidinc.com)

**Subsea Tieback Seminars will be conducted by MTS member Oceaneering Advanced Technologies** June 13–14 and October 10–11 in Houston. These are the second and third of three seminars; the first was held in February. The course segments introduce subsea tieback technology and cover basic overall design, hardware, installation and maintenance from the wellhead to the host facility. The course is aimed at managers, engineers and operations personnel responsible for any or all of the requirements for a subsea tieback project. **Web link:** [www.oceaneering.com/CurrentEvents/SeminarInfo.htm](http://www.oceaneering.com/CurrentEvents/SeminarInfo.htm)

**Using WebEx technology, MTS member Teledyne RD Instruments** has implemented an e-learning program designed to provide the industry with ongoing Internet-based Acoustic Doppler Current Profiler (ADCP) and Doppler Velocity Log (DVL) training. All courses, which are fully interactive and include a PowerPoint presentation, are led by a highly qualified instructor. Courses have been designed to cover a wide array of timely and interesting topics, including Teledyne RDI's hardware, software, data analysis and field applications, as well as tips and tricks to make data collection easier and more efficient. These online courses range from 20 to 60 minutes and are geared toward a variety of users. **Web link:** [www.rdinstruments.com/webex](http://www.rdinstruments.com/webex)

**MTS member Deep Marine Technology Inc. (DMT) has purchased** two additional TritonR XLS Systems, XLS 21 and 22, from MTS member Perry Slingsby Systems. The two new ROVs will be configured with 38.1-centimeter thrusters, 150 HPU with 30 HP auxiliary HPU, station keeping capabilities and enhanced survey suite interfaces, including Ethernet. The system will be configured for heavy-work operations and include 600-meter neutral tether on the tether management system. The ROVs will be installed onboard DMT's new 91.44-meter manned submersible vehicle, the *DMT Emerald*, which is expected to be in service in November 2006.

**Triton Imaging participated in the installation and commissioning** of two multibeam hydrographic systems for the Indonesian Navy Hydrographic Department in January. The hydrographic systems consist of the Triton Hydrographic Bundle™

package interfaced to a RESON 8101 multibeam sonar, TSS motion sensor, SG Brown gyrocompass and Trimble Differential GPS. In this application, Triton's Isis' Sonar software acquires data from the RESON 8101 multibeam and co-registers this raw data with the other ancillary sensor information.

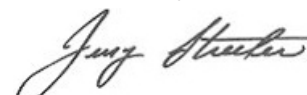
**Several key technologies were used at Schlumberger in this quarter.** In the North Sea, Hydro used the new advanced wireline Sonic Scanner acoustic scanning tool to provide good quality data in a very slow formation where no other technology could have achieved results. Hydro is using Sonic Scanner to improve geomechanical understanding in many difficult-to-drill formations. In Norway, Schlumberger successfully completed the industry's first fully remote drilling optimization and well-placement operation for Statoil's Åsgard field in the North Sea. Working onsite at the client's Stjørdal facility, and from the Schlumberger Operations Support Center in Aberdeen, a joint team of Data and Consulting Services, and Drilling and Measurements engineers provided key geomechanical and well-placement support.

### Meet our challenge for MTS scholarships

Dear Members,

At our recent MTS Board meeting, board members kicked in \$340 to donate to the MTS scholarship fund. We challenge all our business and corporate members to solicit donations from their employees, and individual member donations are needed as well. Mail donations to MTS headquarters or complete the online form at [www.mtsociety.org/education/donate.cfm](http://www.mtsociety.org/education/donate.cfm). The success of tomorrow's marine technologists may be just a scholarship away.

Sincerely,



Jerry Streeter, MTS President

**The 2006 MTS Houston Family Scholarship** is available to relatives of Houston Section members who have attended at least three MTS events over the past six months. Students must be a biological, step- or foster son, daughter, grandchild, nephew or niece of a qualifying member and must meet some other eligibility criteria. Application packets must be received by April 1. For applications and details, select the Student Activities link, then the Scholarships link on the Houston Section web site: [www.mtshouston.org](http://www.mtshouston.org).

**The National Science Foundation has awarded three new grants** in its Centers for Ocean Science Education Excellence (COSEE) program, bringing the total number of the centers to 10. Each new COSEE will receive \$2.5 million over five years. The new centers are the COSEE Great Lakes (University of Michigan and others); COSEE Ocean Systems (Bigelow Laboratory for Ocean Sciences in Maine and others); and COSEE Ocean Learning Communities (University of Washington, Seattle, and others). NOAA Sea Grant is contributing approximately 50 percent of the funding for the COSEE Great Lakes. Each COSEE represents one or more ocean science research institu-

tions, an informal science education organization and at least one affiliate organization from the formal education community. **Web link:** [www.cosee.net](http://www.cosee.net)

**Two free faculty summer institutes at Monterey Peninsula College** are being sponsored by the MATE Center. "Creating a GIS Field Project" is scheduled for July 8–14. It will walk educators through each step of creating GIS projects that they can use in the classroom. "Building Remotely Operated Vehicles" is from July 31 through August 5. It will teach educators how to help their students design and build ROVs that can compete in MATE's regional and National ROV competitions. **Web link:** [www.marinetech.org/education/institutes.php](http://www.marinetech.org/education/institutes.php)

**The 5<sup>th</sup> International Student ROV Competition will be June 23–25 at the NASA Johnson Space Center in Houston, Texas.** Sponsored by the MTS ROV Committee and the NSF's Marine Advanced Technology Education (MATE) Center, the event will be held in the Sonny Carter Training Facility Neutral Buoyancy Laboratory. Teaming up with the National Office for Integrated and Sustained Ocean Observations

(Ocean.US) and the Ocean Research Interactive Observatory Networks (ORION) Program, the 2006 competition is highlighting the new and dynamic world of ocean observing systems and the careers, organizations and technologies associated with ocean observatories. Student teams from middle schools, high schools, home schools, community colleges and universities across the U.S. and Canada are designing and building vehicles to take part in the competition's EXPLORER and RANGER class divisions. Mission tasks include deploying and networking instruments for power and communications and recovering equipment for maintenance and repair. In addition to the international competition, 13 regional contests are taking place across the U.S. and Canada. Visit [www.marinetech.org/rov\\_competition/index.php](http://www.marinetech.org/rov_competition/index.php) for a listing of regional events, including locations and dates. The top winning team from each regional event will move on to the international competition's RANGER class. For more information, visit [www.marinetech.org/rov\\_competition/2006/international\\_comp\\_2006.php](http://www.marinetech.org/rov_competition/2006/international_comp_2006.php) or contact Jill Zande at [jzande@marientech.org](mailto:jzande@marientech.org) or (831) 646-3082.

## MTS Scholarships

### For College Students and High School Seniors

*Let your students and interns know about these valuable opportunities from the Marine Technology Society.*

**Deadline April 17, 2006**

- **\$2,500 Charles H. Bussmann Undergraduate Scholarship**  
(for MTS student-member undergraduates)
- **\$2,500 Charles H. Bussmann Graduate Scholarship**  
(for MTS student-member graduates)
- **\$2,000 MTS Student Scholarship**  
(for non-MTS and MTS student-member undergraduates and graduates)
- **\$1,000 John C. Bajus Scholarship**  
(for MTS student-member undergraduates and graduates)
- **\$2,000 Paros-Digiquartz Scholarship**  
(for non-MTS and MTS student-member undergraduates and graduates)
- **Dieter Family Travel Scholarship**  
(for MTS student-member undergraduates and graduates):  
For full student registration and up to \$500 in travel-related expenses for students wishing to go to the Oceans 2006 MTS/IEEE Conference
- **Up to \$10,000 ROV Scholarship**  
(for MTS student-member undergraduates and graduates, and high school seniors interested in ROVs)

For more information and applications, visit the Education link on the MTS web site:  
[www.mtsociety.org/education/student\\_scholarships.cfm](http://www.mtsociety.org/education/student_scholarships.cfm).

**A Real-Time Ocean Forecast System** that will provide mariners with “nowcasts” and five-day forecasts for the entire North Atlantic Ocean has been implemented by the Environmental Modeling Center, Marine Modeling and Analysis Branch of NOAA. The system generates applications that can support operations at sea, such as search and rescue operations, containment of toxic spills, exploration of natural resources, fishing, recreation and much more. “Expanded ocean forecasting for areas from Europe to the U.S. East Coast and from the Caribbean to Canada represents a major step in NOAA’s commitment to forecasting the earth system,” said MTS member and retired Navy Vice Admiral **Conrad C. Lautenbacher, Jr.**, Ph.D., under secretary of commerce for oceans and atmosphere and NOAA administrator. In the future, this system will provide the foundation for the initial and boundary conditions for the ocean component of NOAA’s coupled ocean-hurricane prediction model, as well as the high-resolution regional models for environmental and ecosystem management, safety of marine transportation and coastal flooding. **Web link:** [polar.ncep.noaa.gov/ofc](http://polar.ncep.noaa.gov/ofc)

**An oceanography satellite has stopped functioning** after a successful 13-year mission. The joint NOAA/Centre National d’Etudes Spatiales Topex/Poseidon satellite ceased operations after nearly 62,000 orbits of Earth when it lost its ability to maneuver. “Topex/Poseidon revolutionized the study of Earth’s oceans, providing the first continuous, global coverage of ocean surface topography,” said Dr. Mary Cleave, associate administrator for NASA’s Science Mission Directorate. “Its data made a huge difference in our understanding of the oceans and their effect on global climatic conditions.” Jason, a follow-on oceanography mission launched in December 2001, is continuing Topex/Poseidon’s study of ocean circulation affects on the Earth’s climate. Beyond Jason, the Ocean Surface Topography Mission to provide high-precision sea-surface height data is in development for a scheduled launch in 2008. **Web link:** [www.jpl.nasa.gov/news](http://www.jpl.nasa.gov/news)

**Downhole safety valves (DSVs) were 100 percent successful** in preventing accidental release of pressure and fluids from wellbores during Hurricanes Katrina and Rita. The Minerals Manage-

ment Service requires all wellbores in the Gulf of Mexico to include DSVs so pressure and fluids can be isolated in the event of an emergency or failure of surface equipment.

**MTS member Haruyoshi Matsumoto has developed autonomous hydrophones** that are helping scientists study endangered whales. Matsumoto is an engineer at the Oregon State University Hatfield Marine Science Center. The new tool can record the whales’ unique clicks, pulses and calls, allowing scientists to distinguish sounds made by different species. The hydrophones can pick up right whale sounds from about 40 kilometers away—and even farther if the waters are shallow and the terrain even. **Web link:** [hmsc.oregonstate.edu](http://hmsc.oregonstate.edu)

**Using a computer model, several marine centers plan to search** for John Paul Jones’s famous ship the *Bonhomme Richard*, which sank in 1779 off the coast of Bridlington in the United Kingdom. The Ocean Technology Foundation (OTF) at the University of Connecticut created the model, simulating the ship’s drift after the battle that damaged it and pinpointing an area where the OTF believes the wreckage lies. Project collaborators include the U.S. Naval Historical Center, the University of New Hampshire Center for Coastal Ocean Mapping/Joint Hydrographic Center, and the College of Exploration and English Heritage.

**The world’s first unobtrusive, grid-connected tidal power plant** will soon be producing power in a Norwegian strait. The Norwegian plant is 50 meters under the sea. It looks like a wind turbine, except it is anchored to the seabed. Tidal currents moving at 2.5 meters per second spin three 10-meter fiberglass blades, generating power that is sent to the grid via a cable. When the tide turns, the blades twist 180 degrees, reversing the direction of the watermill’s rotation. Electricity from the 200-ton apparatus is expected to hit the grid this spring, providing enough power for between 40 and 50 houses. Eventually, repairs will be performed by remotely operated vehicles. The prototype is the first and smallest of 20 mills slated for the Kvalsund Strait, 1,360 kilometers north of Oslo. Another watermill is planned for installation just beneath the waves off the coast of Lynmouth, England, by early summer.

**A five-year program that uses sensors on a fleet of solar-powered autonomous vehicles** to monitor the Chesapeake Bay’s impact on nearby coastal ocean margin ecosystems has won a \$1.8 million grant from NOAA. The grant recipient, Virginia’s Center for Innovative Technology, will also deploy a system of high-frequency coastal radar for measuring surface ocean currents as far away as 200 kilometers from shore. Ship-based research cruises are also planned to collect additional measurements. **Web link:** [www.cit.org](http://www.cit.org)

**Suspensions of Operations (SOO) to oil and gas lessees or operators** who drill ultra-deep wells—deeper than 7,620 meters true vertical depth below the ocean surface—will be allowed under a final ruling issued in December by the U. S. Department of the Interior’s Minerals Management Service. Many companies are reluctant to drill to these depths without additional data analysis, which can be costly and time consuming,” said MMS Director Johnnie Burton. “MMS expects that allowing for SOOs will result in increased domestic production by offsetting the added complexity and cost of drilling ultra-deep wells.” A SOO temporarily stops the clock on the lease term, preventing the lease from expiring. The suspension is allowed under specific circumstances. **Web link:** [www.mms.gov](http://www.mms.gov)

**A team of scientists is using a new sonar technique to locate squid egg clusters** in the murky depths off the coast of Monterey, Calif., offering a window onto next year’s potential squid population in its nursery. The scientists learned how to distinguish subtle sound signals reflected off gelatinous egg clusters and the adjacent sandy seafloor, and they can detect egg clusters less than 0.5 meters across. Using the new sonar methods, the entire Monterey spawning area could be surveyed in less than 40 hours at relatively low cost with a suitably equipped boat towing a side-scan sonar. An article about the technique appeared in the February *Journal of the Acoustical Society of America*. **Web link:** [www.whoi.edu](http://www.whoi.edu)

*continued on page 16*

**A survey of the Aerial and Spaceborne Remote Sensing Market** has been released by Global Marketing Insights Inc. under NOAA sponsorship. The survey represents global input, with respondents from the U.S., Canada, Europe, Africa, Asia, Australia, Central America and South America. In addition to the technical and business components of the survey, the respondents selected trend information that they felt would have the greatest impact on their businesses over the next 10 years. **Web link:** [www.globalinsights.com/NOAA2005-2010TOC.pdf](http://www.globalinsights.com/NOAA2005-2010TOC.pdf)

**Schilling Sub-Atlantic Alliance** has published the first edition of its newsletter, *Full Depth*, which will provide regular insights into important events and issues at MTS member **Schilling Robotics** and Sub-Atlantic. **Web link:** [www.ssaalliance.com](http://www.ssaalliance.com)

**The 11th edition of the Global Maritime Boundaries Database** provides a concise, GIS-based research tool containing the current state of global maritime claims, boundaries and related information mined from Law of the Sea experts, maritime analysts, the U.S. government, the United Nations, published reference books and journals, and the Internet. **Web link:** [www.gd-ais.com/Capabilities/offerings/sr/gmbd.htm](http://www.gd-ais.com/Capabilities/offerings/sr/gmbd.htm)

**Find out which marine organisms generate light** and how they do it at the Bioluminescence Web page of the Monterey Bay Aquarium Research Institute. For researchers, there's a forum for listing recent publications and announcements of upcoming conferences. **Web link:** [www.lifesci.ucsb.edu/~biolum](http://www.lifesci.ucsb.edu/~biolum)

**Eleven papers on the different aspects of the deep-sea environment** associated with polymetallic nodule mining are available from the National Institute of Oceanography, India. The special issue on Indian Deep-Sea Environment Experiment (INDEX) deals with such things as physical and chemical sediment characteristics, as well as restoration of different groups of benthic fauna after the simulated deep-sea mining experiment conducted in 1997. Contact Dr. Rahul Sharma at [rsharma@nio.org](mailto:rsharma@nio.org) for copies or go online. **Web link:** [www.taylorandfrancis.com](http://www.taylorandfrancis.com)

**NSF Current, an e-newsletter highlighting current trends** in basic science and engineering research and education is available from the National Science Foundation. **Web link:** [www.nsf.gov/news/newsletter](http://www.nsf.gov/news/newsletter)

**Spatial thinking is the subject of a free online publication.** *Learning to Think Spatially: GIS as a Support System in the K-12 Curriculum* examines how spatial thinking might be incorporated into existing standards-based instruction across the school curriculum. **Web link:** [fermat.nap.edu/catalog/11019.html](http://fermat.nap.edu/catalog/11019.html)

**Several maps showing the extent of the offshore jurisdiction** for each state are available from the U.S. Department of Interior's Mineral Management Service. **Web link:** [www.mms.gov/ld/lateral.htm](http://www.mms.gov/ld/lateral.htm)

**"Sensors for Environmental Observatories,"** a new report, is available from the National Science Foundation. The Ocean Observatories Initiative is among the systems discussed in the report. **Web link:** [www.nsf.gov/news](http://www.nsf.gov/news)

**"Marine Mineral Resources of Pacific Islands — A Review of the Exclusive Economic Zones of Islands of U.S. Affiliation, Excluding the State of Hawaii"** by James R. Hein, Brandie R. McIntyre and David Z. Piper is a publication written for managers, policy makers and resource agencies, although it will also be of interest to scientists. **Web link:** [pubs.usgs.gov/circ/2005/1286](http://pubs.usgs.gov/circ/2005/1286)

**"Atlantic Coast Offshore Surficial Sediment Data Release,"** a data-release publication that provides an improved and robust integrated database (usSEABED) of seabed characteristics for the Atlantic continental margin of the United States, is available free. **Web link:** [pubs.usgs.gov/ds/2005/118](http://pubs.usgs.gov/ds/2005/118)

**Geological and Geotechnical Engineering in the New Millennium: Opportunities for Research and Technological Innovation**, published by the National Academies Press, is a free online book that presents a vision for the future of geotechnology. **Web link:** [www.nap.edu/catalog/11558.html](http://www.nap.edu/catalog/11558.html)

**Public Connect, the Minerals Management Service's online commenting system**, provides expanded access to regulatory and planning information for its Offshore Min-

erals Management (OMM) Program. Search, view and electronically submit comments on OMM's proposed regulations, lease sales notices, operational plans, environmental reports and related documents that are open for comment in the Federal Register. **Web link:** [ocsconnect.mms.gov/pcs-public](http://ocsconnect.mms.gov/pcs-public)

**World Offshore Drilling Spend Forecast 2006-2010** from Douglas-Westwood contains a detailed analysis of historic and forecast drilling levels and sector spends in both deep and shallow waters. **Web link:** [www.dw-1.com](http://www.dw-1.com)

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## Science and Technology News,

*continued from page 15*

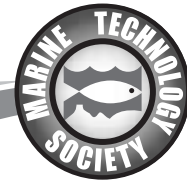
**Ship recycling can contribute to sustainable development**, but its economic contribution can only be achieved by reducing the environmental, safety and occupational health risks related to the process, according to the International Maritime Organization (IMO). The review group, established by the IMO, included the International Labor Organization and the parties to the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal. The group's objective is to draft a legally binding instrument on safe and environmentally sound ship recycling, which will be enhanced by an IMO resolution. The IMO resolution will provide global regulations on the design, construction, operation and preparation of ships. **Web link:** [www.imo.org](http://www.imo.org)

### Conference Proceedings CDs for Sale

Conference proceedings are available for sale online at [www.mtsociety.org/publications/pub\\_list\\_1.cfm](http://www.mtsociety.org/publications/pub_list_1.cfm).

**Membership has its benefits!  
Log on to the site and receive  
your 10% member discount!**

# Marine Technology Society Membership Application and MTS Journal Subscription Request



- Yes, I want to become a member of the Marine Technology Society.*
- I wish to purchase a subscription to the print version of the MTS Journal. (MTS Journal online is a free member benefit not available to non-members.)*
- I'm not ready to join at the present time, but I would like to receive news and information from MTS. Please keep my name on your mailing list. (Please fill in member information section and return to MTS.)*

## MEMBER INFORMATION (Please fill in the address where MTS publications and correspondence should be sent.)

Name: \_\_\_\_\_ Company (if applicable): \_\_\_\_\_  
 Title: \_\_\_\_\_ Email: \_\_\_\_\_  
 Phone: \_\_\_\_\_ FAX: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 \_\_\_\_\_

## MEMBERSHIP CATEGORIES

- MEMBER: \$75** Any person with active professional interest in the marine field or a closely related field. Includes the online version of the Journal.
- ASSOCIATE: \$75** Any person with an interest in the marine field and supporting MTS objectives. Includes the online version of the Journal.
- STUDENT: \$25** Must be a full-time undergraduate or graduate student. Includes the online version of the Journal.
- PATRON:** Any person supporting MTS objectives by contributing \$100 or more annually. (Contribution above \$75 dues is tax deductible.) Includes the online version of the Journal.
- EMERITUS: \$40** Any person who is retired from active professional interest in the marine field. Includes the online version of the Journal.
- LIFE: \$1000** One-time payment. Includes both the online version of the Journal and the paper copy of the Journal.
- CORPORATE Fortune 500: \$2000** Any corporation endorsing the objectives, policies and activities of MTS. May appoint 16 representatives to the Society, who have the same rights and privileges as Members. Includes the online version of the Journal for each representative. The main contact receives a subscription to the paper copy of the Journal.
- CORPORATE Non-Fortune 500: \$1000** Any corporation endorsing the objectives, policies and activities of MTS. May appoint 11 representatives to the Society, who have the same rights and privileges as Members. Includes the online version of the Journal for each representative. The main contact receives a subscription to the paper copy of the Journal.
- BUSINESS: \$550** Any business firm whose gross annual income is less than \$4 million endorsing the objectives, policies and activities of MTS. May appoint six representatives to the Society, who have the same rights and privileges as Members. Includes the online version of the Journal for each representative. The main contact receives a subscription to the paper copy of the Journal.
- INSTITUTION: \$550** Any library, government unit or other qualified nonprofit organization endorsing the objectives, policies and activities of MTS. May appoint six representatives to the Society, who have the same rights and privileges as Members. Includes the online version of the Journal for each representative. The main contact receives a subscription to the paper copy of the Journal.

## MTS JOURNAL PRINT VERSION SUBSCRIPTION

### Domestic Subscription

- Member Rate: Journal Subscription.....\$ 25
- Non-Member Rate: Journal Subscription.....\$120

### Foreign Subscription

- Member Rate: Journal Subscription.....\$ 50
- Non-Member Rate: Journal Subscription.....\$135

*Please complete other side*

# Marine Technology Society Membership Application (continued)

## EDUCATIONAL INFORMATION

Please fill out the following information about yourself:

Check your highest level of education:

High School Diploma     Associate (2 yr.) Degree     Four Year Degree     Graduate Degree     Doctorate

Check all that apply:     B.S.     B.E.     B.A.     M.S.     M.A.     M.E.     Ph.D.     Sc.D.

Do you have a P.E. license?     YES     NO

## BUSINESS/PROFESSIONAL INFORMATION

Name of current employer: \_\_\_\_\_

Your employer's primary line of business at your location: \_\_\_\_\_

If you don't work for an employer, please identify your business: \_\_\_\_\_

If military, rank: \_\_\_\_\_

### Your principal job function/responsibilities:

- Engineering Management
- Science Management
- Sales
- Marketing
- Administration
- Policy Making, Regulatory
- Public Affairs
- Engineering Design
- Mechanical Engineering
- Software Engineering
- Education/Teaching
- Legal
- Consulting
- Retired
- Other (please specify) \_\_\_\_\_

### Your job title:

- President/CEO/COO
- Owner/Partner
- VP, Senior Manager
- Project Manager, Engineering
- Project Manager, Other
- Corporate VP, Engineering
- Engineering Director
- Chief/Senior Engineer
- Chief/Senior Scientist
- Project Manager
- Engineer
- Operations VP
- Scientist
- Other (please specify) \_\_\_\_\_

### Check areas of interest:

- Autonomous Underwater Vehicles
- Dynamic Positioning
- Manned Underwater Vehicles
- Ocean Energy
- Oceanographic Instrumentation
- Remote Sensing
- Remotely Operated Vehicles
- Underwater Imaging
- Marine Geodesy
- Marine Living Resources
- Mineral Resources
- Ocean Pollution
- Oceanographic Ships

- Physical Oceanography & Meteorology
- Seafloor Engineering
- Buoy Technology
- Cables & Connectors
- Marine Archaeology
- Diving
- Marine Materials
- Moorings
- Offshore Structures
- Ropes & Tension Members
- Coastal Zone Management
- Marine Education
- Marine Law & Policy
- Marine Recreation
- Merchant Marine
- Marine Security
- Ocean Economic Potential
- Other (please specify) \_\_\_\_\_

### Optional Information:

Male     Female    What is your age?     Under 30     30-40     41-50     51-60     Over 60

## MEMBERSHIP AND JOURNAL PAYMENT

Payment Method:     Check Enclosed     Master Card     Visa     Diners Club     Am Ex

Make checks payable to the Marine Technology Society (U.S. funds only)

Card #: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### TOTAL PAYMENT:

Membership: \$ \_\_\_\_\_  
Journal: \$ \_\_\_\_\_  
TOTAL: \$ \_\_\_\_\_

### Four easy ways to join!

- Mail:** Send application with check or credit card info to:  
Marine Technology Society / 5565 Sterrett Place, Suite 108 / Columbia, MD 21044
- Fax:** Fax application to: 410-884-9060 (credit card payments only)
- Online:** Apply online at [www.mtsociety.org](http://www.mtsociety.org)
- Phone:** Contact us at: 410-884-5330

# Marine Conference Calendar

## 2006

APRIL 20–21

2006 AAAS Forum on Science and Technology Policy  
Washington, D.C.  
[www.aaas.org/spp/rd/forum.htm](http://www.aaas.org/spp/rd/forum.htm)

MAY 1–4

**OTC.06**  
**Reliant Center**  
**Houston, Texas**  
[www.otcnet.org/2006](http://www.otcnet.org/2006)

MAY 10–13

Cordage Institute 2006  
Annual Conference  
Amelia Island, Fla.  
[www.ropecord.com](http://www.ropecord.com)

MAY 14–17

The Coastal Society 20<sup>th</sup>  
international conference (TCS-20)  
St. Pete Beach, Fla.  
[www.thecoastalsociety.org](http://www.thecoastalsociety.org)

MAY 16–18

International Cable Protection  
Committee Plenary Meeting  
Vancouver, Canada  
[www.iscpc.org](http://www.iscpc.org)

JUNE 4–9

OMAE 2006  
25<sup>th</sup> International Conference on  
Offshore Mechanics and Arctic  
Engineering  
Hamburg, Germany  
[www.oaee.org](http://www.oaee.org)

JUNE 5–7

Coastal Environment 2006  
Rhodes, Greece  
[www.wessex.ac.uk/conferences/2006/coast06](http://www.wessex.ac.uk/conferences/2006/coast06)

JUNE 6–8

Geo-Environment and Landscape  
Evolution 2006  
Rhodes, Greece  
[www.wessex.ac.uk/conferences/2006/geoenv06](http://www.wessex.ac.uk/conferences/2006/geoenv06)

JUNE 7–9

Debris Flow 2006  
Rhodes, Greece  
[www.wessex.ac.uk/conferences/2006/debris06](http://www.wessex.ac.uk/conferences/2006/debris06)

JUNE 7–9

ADCPs in Action 2006  
Cannes, France  
[www.adcp.com/adcps\\_action/aia\\_06/adcp06\\_1.html](http://www.adcp.com/adcps_action/aia_06/adcp06_1.html)

JUNE 11–15

12<sup>th</sup> Pacific Congress on Marine  
Science and Technology  
Yangon, Myanmar  
[www.hawaii.edu/pacon](http://www.hawaii.edu/pacon)

JUNE 12–16

UNICPOLOS-7: The Seventh session  
of the UN Informal Consultative  
Process on Oceans and the Law of  
the Sea  
UN Headquarters, New York  
[www.un.org/Depts/los](http://www.un.org/Depts/los)

JUNE 17

2006 ASEE Workshop on K-12  
Engineering Education  
Chicago, Ill.  
[www.engineeringk12.org/k12workshop2006](http://www.engineeringk12.org/k12workshop2006)

JUNE 18–24

First Asia Pacific Coral Reef  
Symposium  
Hong Kong, China,  
[www.cuhk.edu.hk/bio/APCRS/index.htm](http://www.cuhk.edu.hk/bio/APCRS/index.htm)

JUNE 21–23

EnergyOcean 2006  
San Diego, Calif.  
[www.energyocean.com](http://www.energyocean.com)

JULY 15–23

National Marine Educators  
Association 06  
New York, N.Y.  
[www.nysmea.org/con06](http://www.nysmea.org/con06)

SEPTEMBER 3–8

30<sup>th</sup> International Conference on  
Coastal Engineering  
San Diego, Calif.  
[www.ICCE2006.com](http://www.ICCE2006.com)

**SEPTEMBER 18–21**

**Oceans 2006 MTS/IEEE**  
**Boston, Mass.**  
[www.oceans2006.org](http://www.oceans2006.org)

SEPTEMBER 24–30

UMI 2006: Science, Legal and  
Economic Perspectives of Marine  
Mining  
Kiel, Germany  
[www.underwatermining.org](http://www.underwatermining.org)

OCTOBER 10–13

2006 SNAME Maritime Technology  
Conference & Expo and Ship  
Production Symposium  
Ft. Lauderdale, Fla.  
[www.maritimeexpo.com/2006/home](http://www.maritimeexpo.com/2006/home)

OCTOBER 16–20

The Second Intergovernmental  
Review of the Global Programme of  
Action for the Protection of the  
Marine Environment from Land-  
Based Activities (GPA)  
Beijing, China  
[www.gpa.unep.org/bin/php/igr/igr2/home.php](http://www.gpa.unep.org/bin/php/igr/igr2/home.php)

OCTOBER 18–20

TECHNO-OCEAN2006/19th  
JASNAOE Ocean Engineering  
Symposium  
Kobe, Japan  
[www.to2006-19thOES.com](http://www.to2006-19thOES.com)

OCTOBER 30–NOVEMBER 3

ICES 2006, Fishing Technology in  
the 21<sup>st</sup> Century  
Boston, Mass.  
[www.ices2006boston.com](http://www.ices2006boston.com)

DECEMBER 9–13

3<sup>rd</sup> National Conference on Coastal  
and Estuarine Habitat Restoration  
New Orleans, La.  
[www.estuaries.org/conference](http://www.estuaries.org/conference)



## Advances in Ocean Education: Promoting Lifelong Ocean Education—Exemplary Ocean and Aquatic Education Efforts that Promote Science Literacy for All Americans

**Guest editor: Blanche Meeson of Ocean.US**

This special issue focuses on the application of basic research to real-world education settings, the identification of the high-quality education practices and effective science/technology content, and the transfer of those practices and content to educators who will use them every day with their audiences.

**The MTS Journal is recruiting book reviewers.** Contact Stephanie Showalter, book review editor at [sshowalt@olemiss.edu](mailto:sshowalt@olemiss.edu), or Amy Morgante, *Journal* managing editor, [morganteditorial@verizon.net](mailto:morganteditorial@verizon.net). Reviewers generally have a choice of several books, and all attempts are made to match books with a reviewer's experience and interest. Also, contact Showalter or Morgante to suggest titles for review.



**Currents**, published bimonthly, is a membership benefit of the Marine Technology Society, the leading multidisciplinary society for marine professionals.

**Individual membership is \$75. Life membership is a one-time \$1,000.**

**Executive Director:**  
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