



TECH TRANSFER NET

Fall 2016 Edition

Jim Partan & Keenan Ball present their Ropeless Lobster Trap technology during the Governor's Visit

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Looking for Co-Founders

Know someone with the right background who may be interested? Send them our way!

Several exciting startups are in the works at WHOI! The Office for Technology Transfer needs volunteers to lead these companies to commercial success. We are seeking product development professionals with commercial leadership experience in hardware, pharmaceuticals, medical devices, electronics, or ocean technology.

We are asking our OTT network to send possible volunteers our way. Interested Individuals are invited to email us a resume or register as a Tech Mentor/Champion [here](#). Please note that WHOI does not provide a salary for these opportunities.

2016 Shark Tank Review Underway

Announcing revisions to the 2017 Shark Tank submission and review process...

2016's Shark Tank applications are now under review- with an awardee expected to be selected in November. This year, OTT received four applications- slightly less than in 2015.

In order to contribute more expertise to the business aspect of the submissions, next year's Shark Tank, will feature a few changes in the application process. Starting in 2017, applicants will be asked to submit a preliminary single page application describing the market opportunity for their technology. Applicants will then be paired with a Mentor from the business community to assist with improving and polishing their

business pitches.

This new process is meant to screen out technologies still in the basic research phase, to improve competitiveness for all Shark Tank applicants, as well as to prepare applicants for discussions with, and presentations to industry.

Shark Tank Awardees will be announced in the 2016 Annual Report

In addition to the pool of interested individuals who have registered as potential mentors and champions through our [web site](#), OTT values your networking capabilities in finding qualified individuals interested in mentoring WHOI scientists and engineers in pitch presentation review and preparation.



WHOITechTransfer

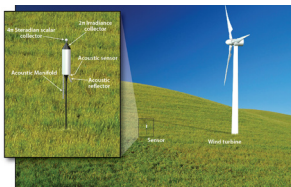
OTT IN THE NEWS

Whale Safe Fishing Gear

Whale entanglement in fishing gear is a growing concern for the lobster fishing industry. Two WHOI engineers discuss the invention of a device that they say could help whales avert entanglements and allow currently restricted waters to be safely reopened for lobster fishing.

MIME Issued Patent

Newly issued patent for a Multimodal Environmental Impact Monitor for wind turbines

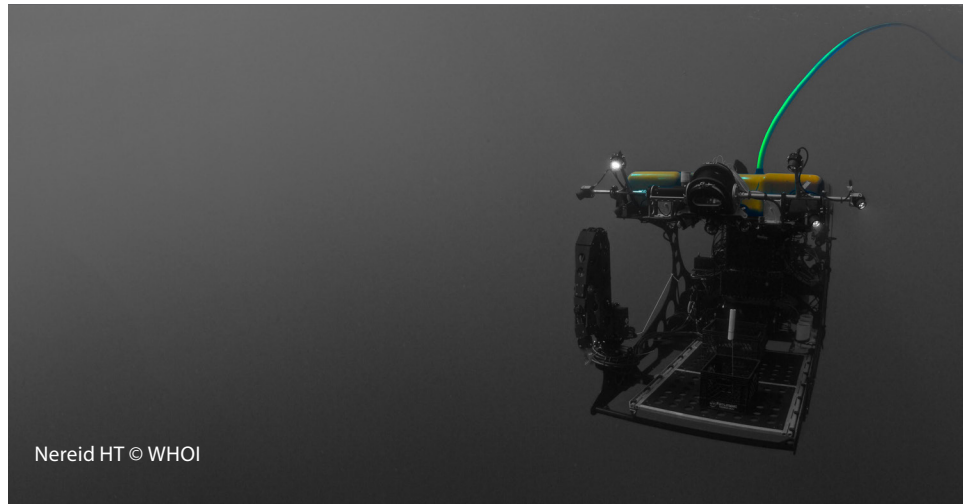


Buoy Saves Whales From Boat Strikes

EOMs Passive Acoustic Moorings are being used to detect whale presence and movement in New England waters. Video: [here](#)

Shark Tank for WHOI Scientists

WHOI OTT provides scientists and engineers gap-funding to move towards commercialization



Nereid HT © WHOI

Nereid HT & Lifting Tether

Technology Spotlight

New light work-class ROV/AUV & Hybrid Tether system

The Nereid HT (Hybrid Tether) from WHOI's Deep Submergence Laboratory has the ability to switch seamlessly between a traditional tether cable, fiber optic line, and combined acoustic/optic wireless modem, offering a new degree of flexibility in undersea exploration.

The hybrid tether system was created as a responses to the significant burden traditional tethers place on vehicles, particularly as undersea robotics reach greater depths. Eliminating dependence on traditional tethers and creating more versatile, lightweight hybrid ROVs/ AUVs allows vehicles to operate both at extreme depths (up to 11,000 m) and extreme

horizontal distance from surface vessels (under ice).

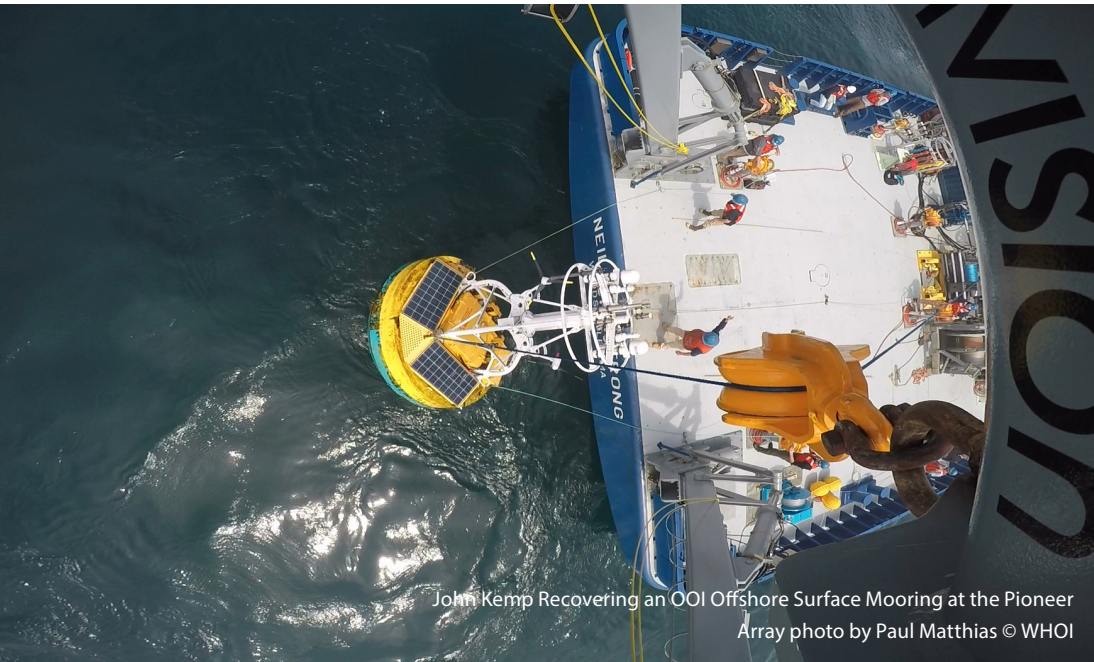
Part of the hybrid tether system is the newly patented Lifting Tether which utilizes a terminal lead for additional weight support during launch and recovery. The weight-bearing lead allows for the use of lighter tethers which in turn require smaller winches, and enable the use of smaller vessels.

Check out the feature on Nereid HT and it's recent work in Panama in the November issue of Ocean News & Technology as well as ROV Planet Magazine.

Follow Us:

Head over to WHOI's social accounts and follow for Tech Transfer news & updates.





John Kemp Recovering an OOI Offshore Surface Mooring at the Pioneer
Array photo by Paul Matthias © WHOI

EOM Seeking Partners to Develop High-Power Stretch Hose Prototypes

Licensee News

EOM Offshore (EOM) is a startup company founded in 2009 commercializing key specialized mooring technologies. EOM is the exclusive licensed distributor for patented stretch hose technology.

Stretch hose moorings are capable of stretching and contracting to accommodate wave action (heave and surge), they are mechanically silent,

electrically conductive moorings intended for use with hydrophones and other sensitive listening installations. They also extend mooring lifetimes due to the extended resistance of the stretch moorings to wave action fatigue.

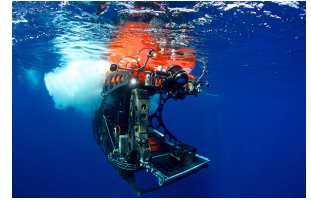
EOM stretch hoses are currently being used by the National Science Foundation-funded Ocean Observatories Initiative

(cont. on page 4...)

OTT IN THE NEWS CONT.

Nereid HT

Nereid HT is featured in the November 2016 issue of [Ocean News & Technology](#) & [ROV Planet](#)



WHAT TO WATCH FOR

Upcoming publications featuring WHOI technologies

EOM

EOM & Stretch Hose technology will be featured in the winter edition of [Wave & Tidal Energy Network](#) in a special Anchorings & Moorings issue. This issue will be released in February 2017.



Highlighted Issued Patent:

“N-Wavelength Interrogation Scheme for Low Coherence Interferometers” Inventors: Jason A Kapit, Norman E. Farr Raymond Schmitt

Patent No. 9,441,947 Issued: 09/13/2016

A new exceptionally sensitive interferometric technique enabling improved combinations of resolution and range, which can be used for the determination of pressure, distance, and other physical and chemical parameters.

Highlighted Patent Filing:

“Aquatic Sampler and Collection Apparatus”

Inventors: Andrew Billings, Carl Kaiser, Cindy Lee Van Dover
PCT/US16/44061 Filed: July 26, 2016

Unlike sampling devices used in the past, which often damaged delicate plankton, the new Sentry Precision Robotic Impeller Driven (SyPRID) sampler gently pumps large volumes of water, and the microscopic organisms it contains, through a net system housed within two carbon fiber composite tubes.



Chris Hines (EOM Offshore) helping to prepare the Environmental Sample Processor (ESP) which utilizes the EOM stretch hose. Photo by Tom Kleindinst © WHOI

(Licensee News cont. from page 3...)

(OOI), a long term, integrated infrastructure project composed of science-driven platforms and sensor systems that measure physical, chemical, geological and biological properties and processes from the seafloor to the air-sea interface.

A WHOI-led team has designed and deployed global buoys and gliders at four OOI Global Arrays, to address planetary-scale issues in critical high-latitude locations in the Northern and Southern hemispheres. Additionally, the WHOI team led the design and deployment of buoys and gliders at the Coastal Pioneer Array off the coast of New England. EOM's Electromechanical Stretch Hoses are employed in these moorings, ensuring the reliable flow of real-time data.

Stretch Hose technology is also present in EOM's Passive Acoustic Moorings which enable detection of marine mammal vocalizations with real-time telemetry. They are currently being used to aid the endangered North Atlantic right whale which frequently get hit by passing ships causing severe injury or death. Listening from

shore to the right whales' vocalization from Passive Acoustic Moorings, researchers and observers are able to monitor the presence and location of these animals. With this information, vessels can be warned to change their course or lower their speed reducing the risk of collisions.

Passive Acoustic Moorings have been deployed near New York, Massachusetts, and Maine, in and around busy shipping lanes, relaying information on whale presence and location in near real-time to prevent ship strikes. These innovative stretch hose moorings, supporting a hydrophone, can detect and relay underwater sounds in all sea state and weather conditions.

EOM is in the process of extending the power-handling capabilities of the stretch hose to encompass the high voltage and current which is required by floating offshore power-generating installations. They are seeking development partners to create high-power prototypes. Stretch hose technology is currently covered by two issued and one pending US patent. EOM will be featured in Wave & Tidal Energy Network in February 2017.

Upcoming Events

Upcoming Events for OTT are posted on the [News & Events page of our website- please check back for late 2016/ early 2017 events.](#)

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Shark Tank 2017

Shark Tank 2017 will take place next September with new candidate/application process (See page 1)

T B D

Startup Weekend 2017

Startup Weekend 2017 will take place at MIT and is anticipated for April 2017- details & confirmed dates to be determined

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