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What's happening in the world's

Ship Yards

Ballast Water Technology
The Time is Now

AWO
Working Hard for the Domestic Workboat Market

Sea Machines
The Autonomous Workboat

Hour of Power
& Hybrid Propulsion

Sea Machines

Helping to usher in the age of the Autonomous Workboat

While the topic of unmanned vessels has sparked vigorous debate and grown vociferous skeptics in all four corners of the world, Michael Gordon Johnson and his team at Sea Machines are intent on bringing an Autonomous Workboat to full-scale real-world trials by the end of the year.

By Greg Trauthwein

Michael Gordon Johnson is and entrepreneur, founding two companies and serving in various roles – offshore, heavy lift ocean transport and marine salvage – since graduating from Texas A&M University with a BA in Marine Engineering. Most recently he was a VP of Business at Titan Salvage and a VP of Projects at Crowley.

His new venture is Sea Machines, a company created to design and provide unmanned work boats and autonomous control systems for the commercial marine and offshore markets. "The idea was conceived like a puzzle over the last five years, piece by piece as I managed and executed various marine projects," said Johnson. "Once the concept came together, I quickly realized that this is the future of marine operations and the 20-year transition towards full adoption of unmanned vessels for certain markets is just about to commence."

Today, Sea Machines is nearing completion of its 24 ft. prototype steel work boat, with the intent of having it on the water in the Autumn of 2015.

The Age of Autonomy

"The traditionally crewed boat has certain limitations and a Sea Machine combines a sound hull form with modern sensors and control systems and can perform long duration, repetitive, or dangerous work boat tasks more efficiently and more safely than a manned vessel," summarized Johnson.

Version 1 (V1) Sea Machine will be a 20 ft. aluminum offshore unmanned work boat that will be ready to perform collaborative operations such as dual towing with a manned boat as found in oil boom skimming or fish seining, marine mammal escort monitoring or supervised domain grid-line operations for

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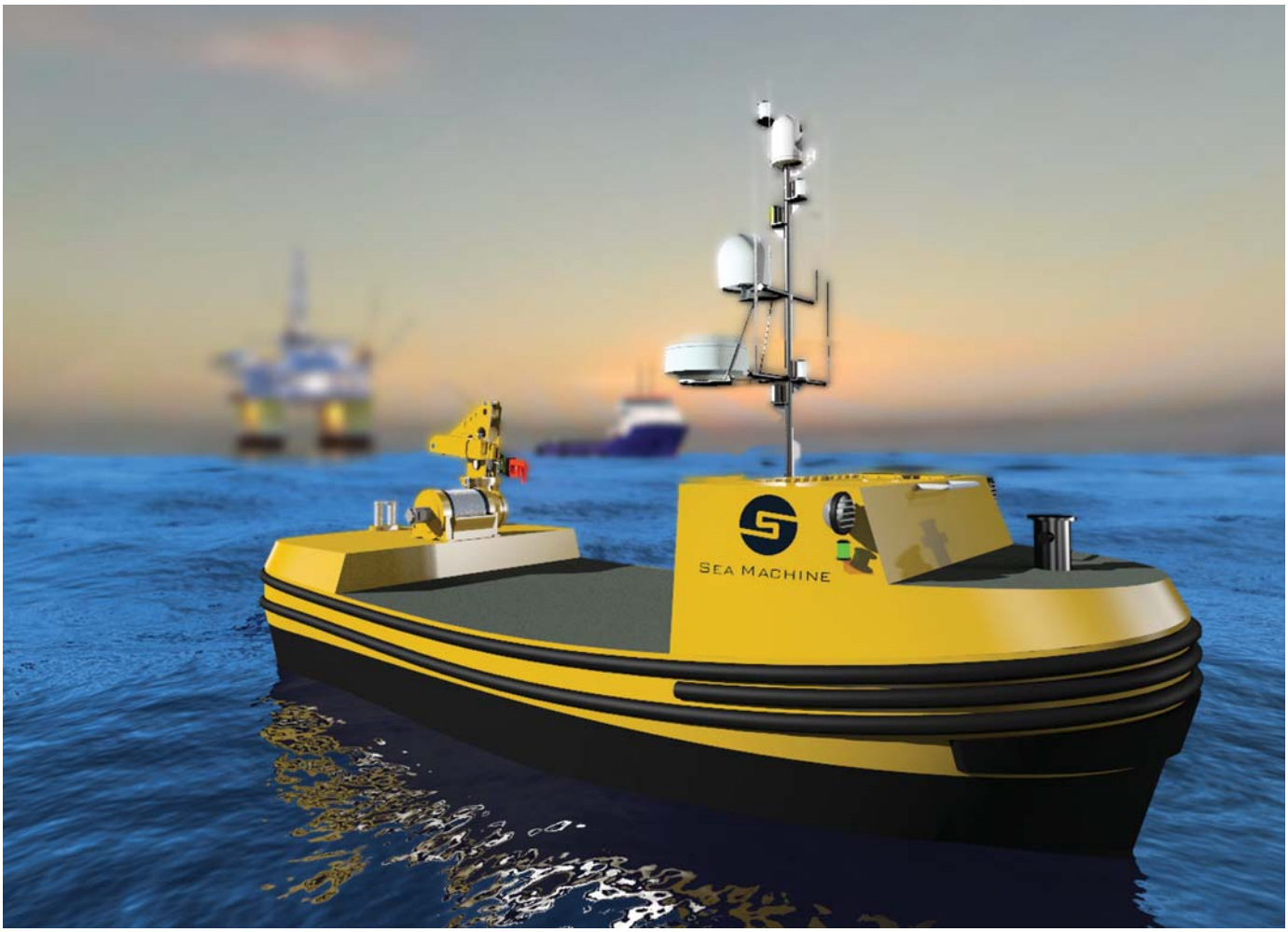

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Michael Gordon Johnson,
Founder, Sea Machines

bathymetric surveying.

Sea Machine V1 is a small work boat with 500 gallon (or LNG equivalent) of diesel tankage. It will feature a diesel hybrid system to provide a duration of up to 7-21 days continuous operation depending on the required effort and loading.

"The Sea Machine will also be ready to be used as direct remote control operation for unique tasks such as marine firefighting."

While the target markets for an autonomous vessel that can work efficiently are many – think surveying, dredging, and oil spill skimming, to name just three – Johnson said "any market that utilizes small work boats in performing repetitive tasks where care of the crew actually reduces efficiency and adds liability"

While the concept of autonomy has its fair share of skeptics, Johnson and his team believe the time is now, as technology has emerged to make the Sea Machine a reality on the working waterfront.

"It's the combination of smaller more powerful and reliable computers and sensors combined with the advances in control theory and growth of the field."

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