blue zone GROUP

UnderCurrents

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Unmanned Logistics to the Beach & Beyond

"The question is not will the Navy use unmanned maritime systems in military operations, but rather how many will the Navy operate."

The use of unmanned surface vehicles (USVs) and unmanned underwater vehicles (UUVs) is growing, as both of these are proving to be increasingly useful for a wide range of military applications. Logistics in support of amphibious assault is a new application now being demonstrated. Using unmanned vehicles for the sustainment mission can be a game changer for expeditionary assault forces. Beyond taking operators out of harm's way, using USVs in this role frees manned craft for other missions. In addition, having a continuous, pre-programmed logistics resupply process to perform one of the dull, dirty, and dangerous functions important in an amphibious assault means there is one less thing for commanders to have to manage during these operations

Unmanned Surface Vehicles for support of amphibious landings

Phased Array ADCPs and DVLs

Smaller Sonars that Pack a Punch

Teledyne RD Instruments 2D Phased Array technology has pushed back the practical, mechanical limits for transducer size and frequency at both ends of the size continuum. This expands the scope of ADCP and DVL performance and widens the range of configurations while still making four different measurements simultaneously-- two from an acoustic pulse profiling the water column (velocity profile, echo intensity profile), and two from a bottom-tracking (BT) pulse (velocity over bottom, altitude above bottom).In this webinar, Dr. Peter Spain; Staff Scientist, Teledyne RD Instruments discusses measurement capabilities using Teledyne RDI's 2D Phased Array technology.

- For ADCPs, Phased Array technology permits longer range profiling (800-1000 m) at lower frequencies (38, 45 kHz). This enables measuring deep-water currents that can reveal previously unseen patterns of deep circulation.
- For DVLs, Phased Array technology permits increased performance in smaller configuration.

Phased Array ADCPs and DVLs

SeaBotix ROV Blowfish

Explosive Ordnance Disposal (EOD) Application

The Teledyne SeaBotix vLBV 300 ROV has demonstrated its versatility by integrating a package to enable Explosive Ordnance Disposal.

Blowfish developments included the successful integration of a lightweight manipulator arm onto a modified Teledyne SeaBotix vLBV 300 ROV, with state-of-the-art navigation package, the SeeByte CoPilot. The system also integrates a fielded EOD TiTAN disruptor tool modified for maritime use to deliver a low-collateral damage effect that will neutralize an underwater threat.

[Blowfish Project: Securing Waterways from Improvise Explosive Devices]

New Products & Services

Early Adopter Program for MANTAS T24 Unmanned Surface Vehicle

Revolutionary Unmanned Surface Vehicle (USV)

BlueZone group partner, MARTAC Systems has announced an Early Adopter Program for the revolutionary MANTAS T24 Unmanned Surface Vehicle (USV). The MANTAS T24 forms one component of the MARTAC large USV range which includes the T24 Harbour Class, T38 Fleet Class and T50 Medium Class.

The MANTAS USV design features a catamaran hull/deck construction using special weave carbon fibre or fiberglass material depending on mission requirements. Hulls can be infused with Kevlar for ordnance resistance and are constructed around high density foam cores optimised throughout the vessel providing an “unsinkable” flotation capability. Unique “Gator” and “Tail Gator” modes enable covert submergence operations or avoidance of detection.

Versatile engine and component mounting rail systems provide multi-role operations while a telescoping superstructure arch allows for storage and transportation.

[MANTAS T24 Unmanned Surface Vehicle Early Adopter Program]

OceanTools D7 & D10 DyeTectors®

Advanced subsea dye detection system

BlueZone is pleased to announce the OceanTools D7 & D10 DyeTectors® available for purchase or rental:

- Rhodamine, Fluorescein or Ultraviolet dye detection
- Focused beam and filtered high intensity LEDs
- Light amplification and photon detection technology
- 6000m standard depth rating or 1000m option

The D7 DyeTector is a state of the art subsea leak and dye detector. High-power LED light is focused through lenses and filters to create a concentrated beam that is tuned to a specific wavelength to cause maximum fluorescence of the dye. Detection electronics employ clever light amplification technology to amplify even the smallest amounts of fluorescence from the agitated dye molecules.

[OceanTools D7 & D10 DyeTectors® Advanced subsea dye detection system]

Newcastle
+61 2 4964 3500
21 Huntingdale Drive
Thornton, NSW 2322, Australia

Melbourne
+61 3 8720 0300
9 Macquarie Place
Boronia, VIC 3155, Australia

Perth
+61 8 6595 1500
Unit 1, 41 Discovery Drive
Bibra Lake, WA 6163, Australia

www.bluezonegroup.com.au