JAIA ROBOTICS

MICRO IS MORE

Confirmatory Beach Report Comparison Matrix Warfighters vs JaiaBot Aquatic Drones

Collecting data for Confirmatory Beach Reports places mission critical personnel in harm's way and typically takes more than 8 hours in the surf zone, not including ingress and egress times.

Many of the data products are based on subjective assessments, transcribed onto dive tablets that are then transferred to assessment tools on board the “mother” vessel, by which time they may be out of date.

JaiaBots reduce risk to personnel, significantly shorten timelines, extend endurance, and provide qualitative real-time data with covert delivery options.

Impact	24 Recon Marines or Divers	8 JaiaBot-HYDRO Aquatic Drones
Risk to Personnel	High – multiple divers exposed in hostile surf conditions	Low – unmanned systems do not require the warfighter to be in the water
Time to complete	8 hours	30 – 60 Minutes
Cognitive Load	Increased by transit distances, diver fatigue and environmental conditions	Reduced by providing autonomous data collection and persistent real time updates
Data Quality	Subjective data; dependent on human senses in high stress conditions	Objective data; JaiaBots fitted with calibrated instrumentation and sensors
Insertion Method	Exposed CRRCs, SDVs, long distance swims, night ops	Deployed from ship, shore, or air any time with low signature and detection risk
Logistical Burden	High – 6 CRRCs, 24 recon Marines	Moderate – 2 CRRCs, 8 Marines
Obstacle Detection	Visual and manual checks. Time consuming	Fast, area coverage with user defined spatial resolution
Stealth & Signature	Moderate detection risk high impact if detected.	Very low detection risk, small visual signature, RF silent option, expendable
Surf Zone Survey	WWII methods for depth, current vectors and trafficability	Autonomous depth and current vectors data with and bottom type classification
Beach Survey	Manual terrain and obstacles assessment	Slope of beach calculated and recorded with JaiaBot sensors
Surf Report	Body height and thumb are used to estimate wave heights	JaiaBots measure height, period and drift scientifically
Output Product	Intelligence report utilizing subjective data that may be out of date due to weather and tide cycles	Digital datasets derived using scientific instruments to create automated reports in real time