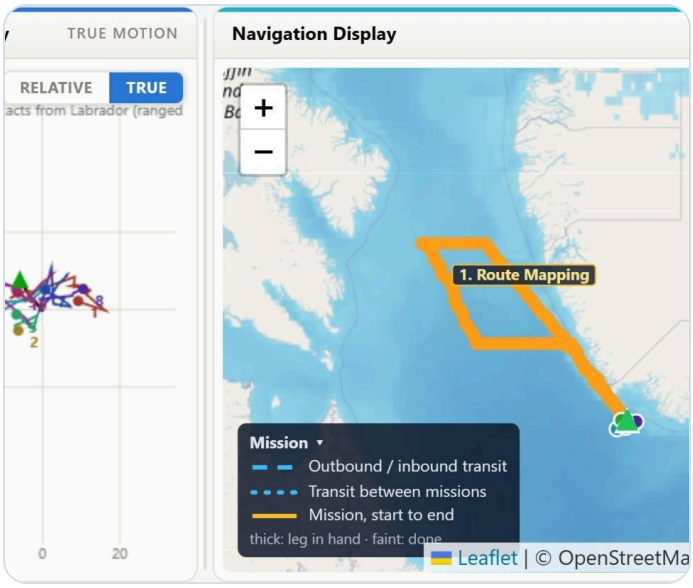
TRIDENT

Navigate. Track. Decide. At sea.

Trident runs the mission on board UUVs, USVs, buoys and seabed nodes. It executes the Poseidon mission package autonomously, adapts within the limits it was given, and sends progress, observations and outcomes home over telemetry.

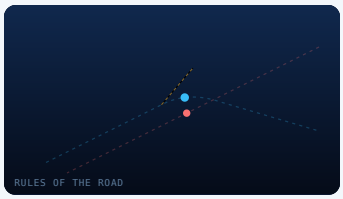


10
contacts held at once in passive TMA

10
mission types, plus composite

2
complete platform simulations in the Vessel Emulator

FEATURES



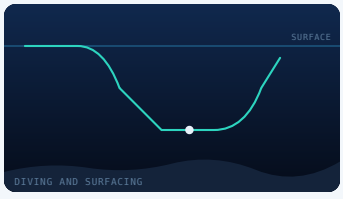
Rules of the Road anti-collision

Anti-collision under the Rules of the Road (COLREGs), while keeping to the mission.



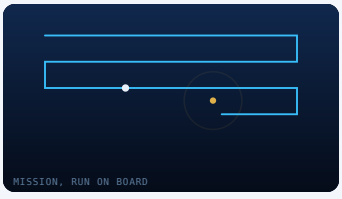
Autonomous navigation

Decides its own 3D route and next waypoint over the real seabed. Position comes from GPS, AIS or other navigation aids.



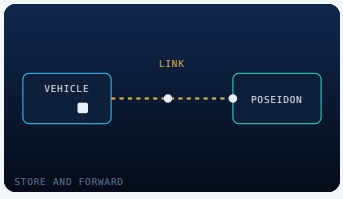
Diving and surfacing

Dives to the depth each task needs and comes up for comms windows, within the limits Poseidon set.



Mission execution

Runs the whole Poseidon mission package and adapts search patterns, sensor use, local route and depth where the mission allows.



Store and forward communications

Progress and observations are held on board and sent home at each comms window.

Secure at sea

Auto-erase if the vehicle is lost. Signed orders: it rejects anything forged, altered or replayed. Compact messages for low-bandwidth links. MIL-STD-2525D / APP-6(D) symbols (STANAG 2019).

Screens from TwoBlue software running demo scenarios with simulated and emulated data. Scenarios are illustrative.

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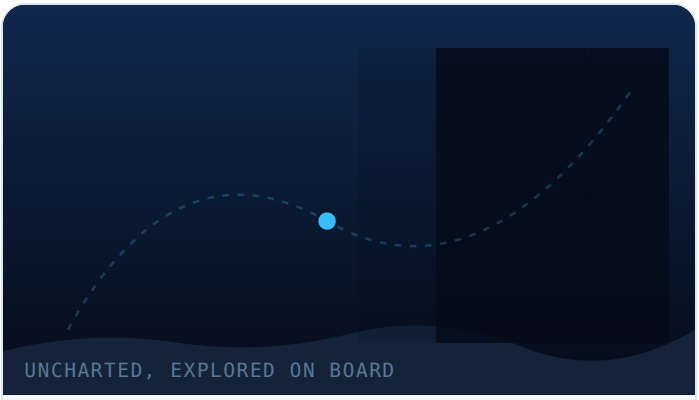
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USE CASES



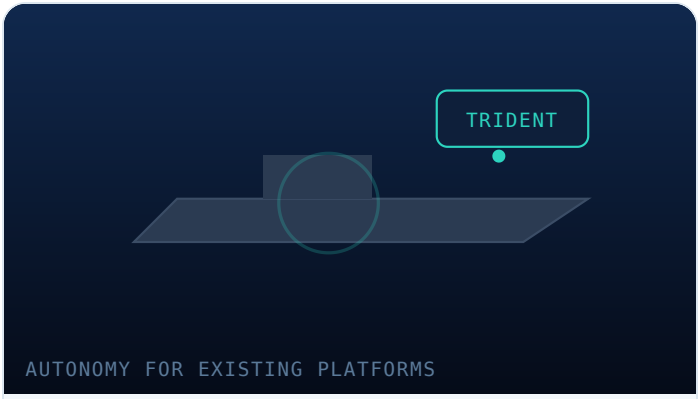
Operations despite poor communications

Keeps working the mission when the link drops, and reports at the next comms window.



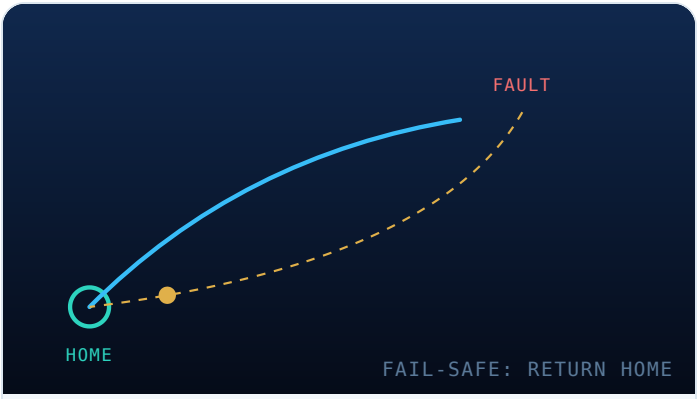
Operations in unknown areas

Works where charts and observations are sparse, adapting its local route within the limits Poseidon set.



Autonomy for legacy platforms

Runs on board existing UUVs, USVs, buoys and seabed nodes, giving them autonomous mission execution.



Fail-safe return home

Energy, lost-link and equipment-fault fail-safes bring the vehicle home. In Manual they warn, and the operator decides.

SEE THESE ANIMATED AT XALTCRAFT.COM/GO/TRIDENT

ILLUSTRATIVE SCENARIO

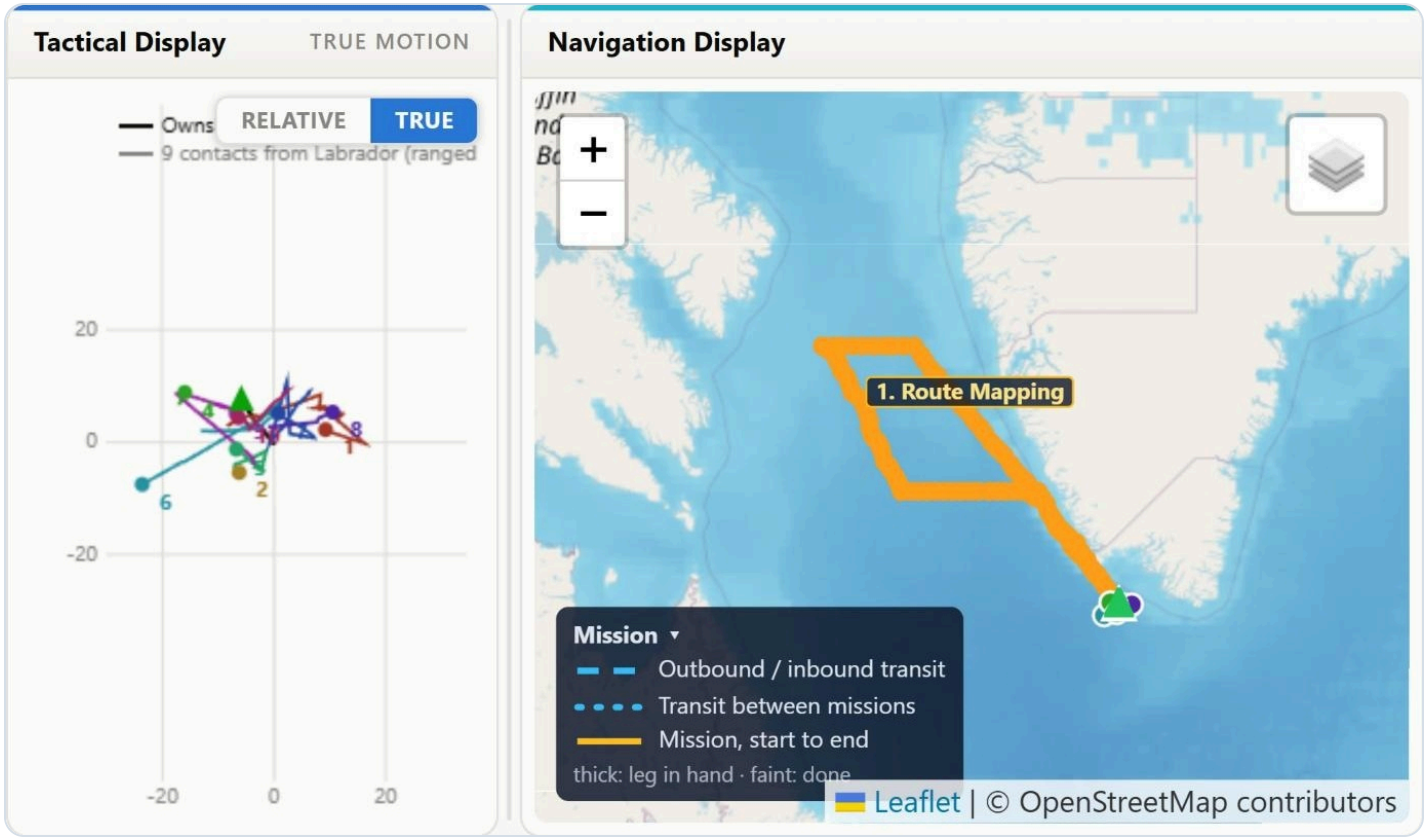
Route clearance off a busy coast

A Trident UUV leaves harbour on a route clearance task. It transits under the Rules of the Road, holds ten contacts in its passive tracker, eases its local route around a fishing fleet within the limits Poseidon set, surveys the route, sends progress home and brings the full data set back at the end.

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ON SCREEN



TRIDENT TACTICAL AND NAVIGATION DISPLAYS

TEN MISSION TYPES, PLUS COMPOSITE

Surveillance · Mine Hunting · Route Clearance · Searches · Shadowing · Infrastructure Inspection · Photographic Survey · Decoy · Bottoming / Loitering · Swarm Deployment

> Takes its mission from Poseidon. Gets contacts from Labrador Edge on board. Rehearse it first in the Trident Vessel Emulator.

EVERY MISSION COLLECTS DATA

Every mission collects data in parallel: short updates during the mission, then the full data set and a tamper-evident, sealed mission report at the end.

See Trident running

Ask for a live demo, or a call with the team that builds it. The QR code opens the Trident page, with these use cases animated.

xaltcraft.com/go/trident

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