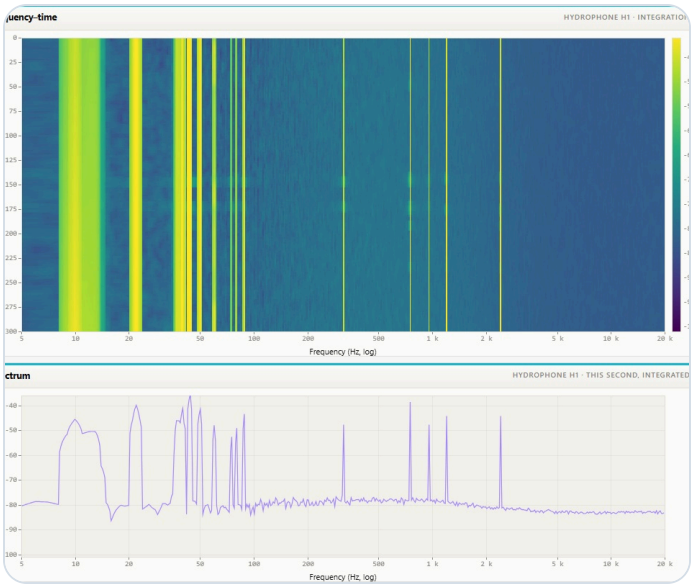
LABRADOR

Every sensor. One picture.

Labrador is TwoBlue's sensing system, at the edge on every platform. It controls the sensors, processes acoustic, magnetic and optical data, and fuses them with radar, AIS and other feeds into one contact picture for Trident, Zeus and Poseidon.



3

sensing modalities: acoustic, magnetic, optical

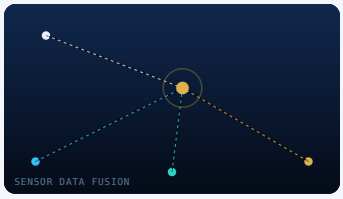
10

contacts held at once in passive TMA

1

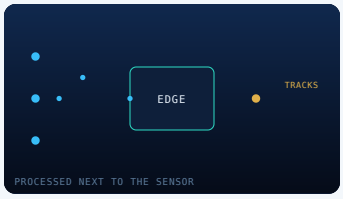
contact picture from every source

FEATURES



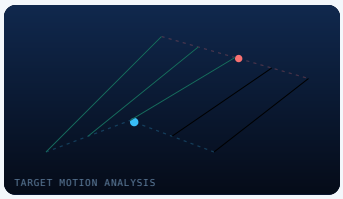
Sensor data fusion

Radar, AIS, acoustic, magnetic, optical and other feeds fused into one contact picture.



Edge computing

Processing on board, next to the sensor, so only contacts and tracks need to go home.



Target motion analysis

Passive tracking of up to ten contacts at once: course, speed, range, CPA and TCPA.



Simulations and emulations

Array Placement and Array Performance emulators test sensor layouts and designs before installation.

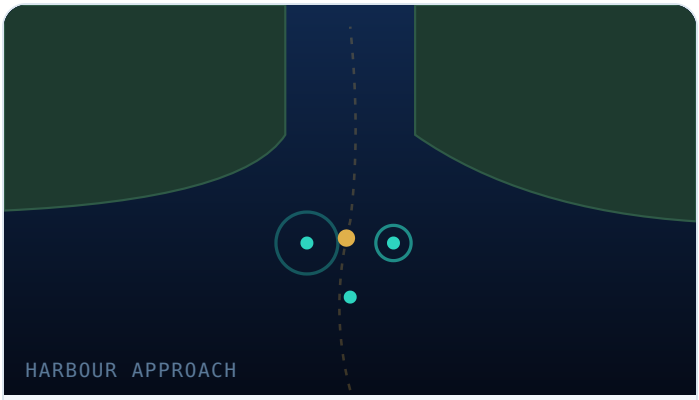
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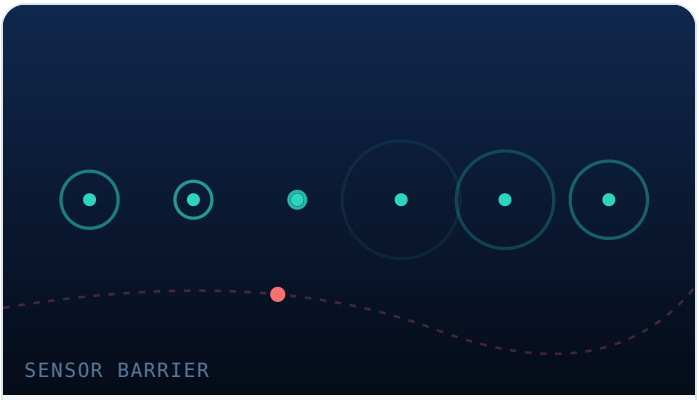
Screens from TwoBlue software running demo scenarios with simulated and emulated data. Scenarios are illustrative.

USE CASES



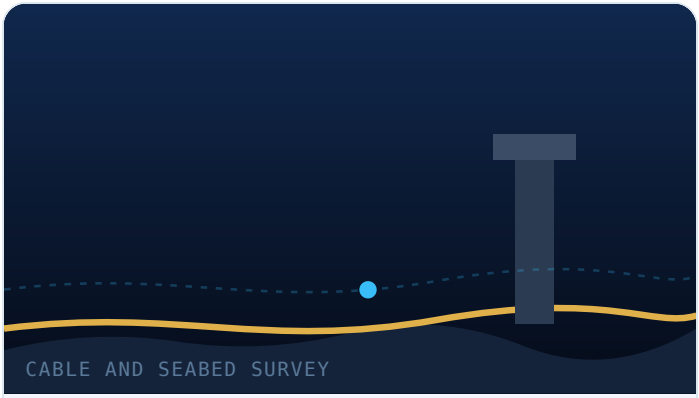
Harbour approach watch

Bearings, passive range and classification, fused with radar and AIS into one track.



Passive sensor barrier

Hydrophone arrays hold up to ten contacts with no active transmission.



Cable and seabed survey

Magnetic anomaly maps along a route, where acoustics are degraded.



Vessel noise monitoring

Automatic DEMON classification of passing ships, with a stated confidence.

SEE THESE ANIMATED AT XALTCRAFT.COM/GO/LABRADOR

ILLUSTRATIVE SCENARIO

One faint engine at night

Off a harbour at night, a Labrador-equipped Trident hears a faint engine. The array gives a bearing and a passive range estimate; automatic DEMON classification counts five propeller blades and calls it a fishing vessel; AIS shows no ship there; a shore radar confirms the range. Labrador fuses it all into one track and hands it to Trident and Poseidon.

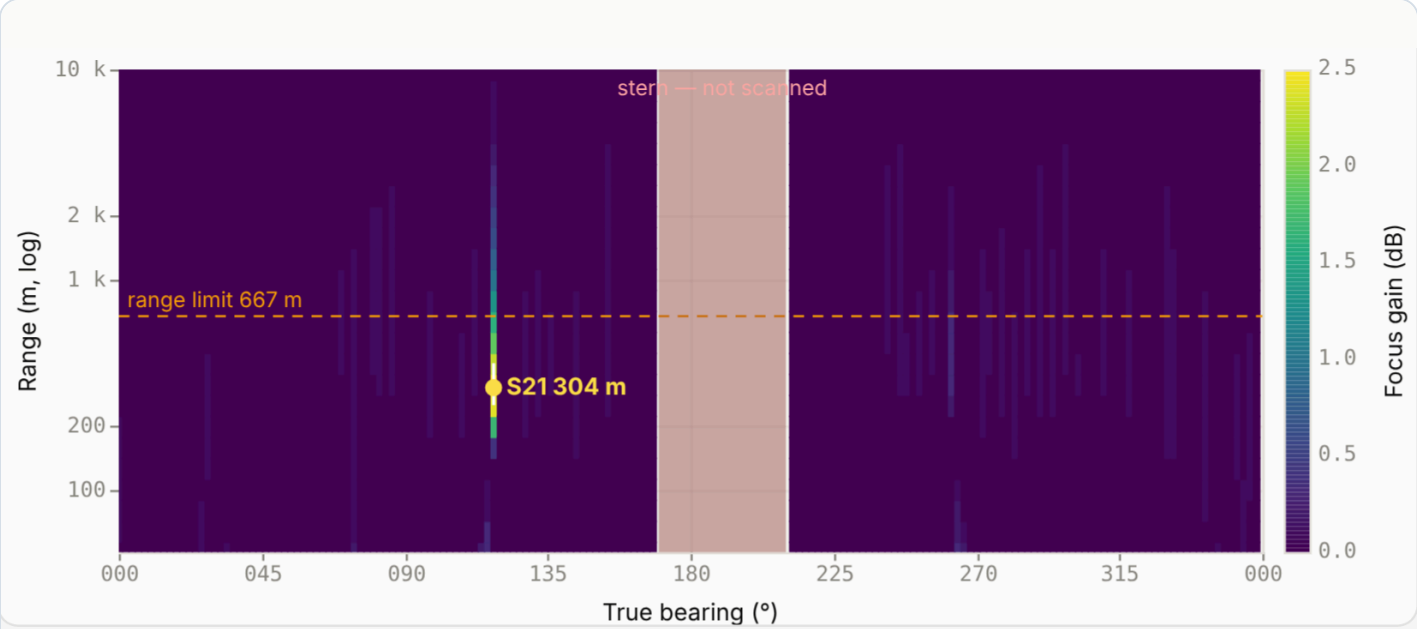
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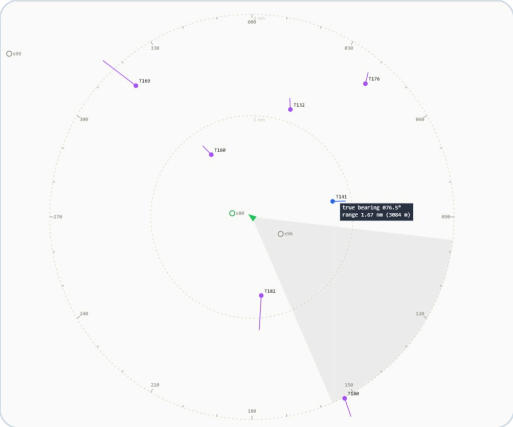
ON SCREEN



PASSIVE RANGE ESTIMATION: CONTACT FIXED AT 304 M



AUTOMATIC DEMON: 5 BLADES, 240 RPM SHAFT



FUSED CONTACT PICTURE, OWN-SHIP CENTRED

On board Trident and Zeus. Sends contacts to the vehicle and to Poseidon. Design its arrays first in the Labrador emulators.

See Labrador running

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

xaltcraft.com/go/labrador

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