ICPC PLENARY 2026 | ATHENS

An industry first in subsea cable protection

Real-time vessel threat intelligence, integrated directly into a network management system for the first time.

Starboard Maritime Intelligence

A Starboard collaboration with ciena SouthernCross Cable Network

For the first time, real-time vessel threat intelligence has been integrated directly into a submarine cable network management system, putting maritime risk data alongside network operations in a single pane of glass.

Starboard Maritime Intelligence, Ciena, and Southern Cross Cables Limited have completed an integration that delivers Starboard's AIdriven vessel risk alerts into Ciena's Navigator Network Control Suite, operational inside Southern Cross's Network Operations Centre. The integration uses a gRPC API to link Starboard's vessel tracking system with the Ciena transmission NMS, enabling actionable alerts to flow directly into the network operator's existing workflow.

The challenge

The subsea cable industry has operated with a fundamental gap: the people managing the network and the people monitoring the ocean have been working in separate systems, with separate data, on separate timelines.

When a cable fault occurs, operators must manually check the transmission NMS, interrogate the wet plant to identify fault location, then separately open the vessel tracking system to identify the cause. This process takes approximately 25 minutes across three independent consoles.

With 204 cable repairs recorded in 2024 and over 3,000 during the last 17 years, and 86% of those caused by fishing and anchoring, the operational and financial case for proactive, integrated threat detection is compelling.

What this integration delivers

- Vessel threat alerts pushed directly into Ciena's Navigator NMS as filterable alarms, including vessel name, MMSI, IMO, flag state, and vessel type. These are viewable alongside transmission and wet plant alarms.
- One-click navigation from an NMS vessel alarm to the full Starboard vessel detail view, with track history, ownership, risk indicators, and actionable alerts.
- Automated correlation of vessel behaviour with cable system, SLTE, and wet plant alarms — showing affected services and related faults in a single view.
- Escalation matrix with automatic notification to customers, insurers, and law enforcement contacts.
- Full audit trail of vessel identity, behaviour, and proximity data for callout notices and compensation claims.
- Operational response time reduced from approximately 25 minutes to three minutes.

How it works: the circle of cable security

1. Detect

Vessel approaches cable. Starboard raises alert based on vessel behaviour, speed, type, and risk profile. Warning alerts raised. Vessel can be challenged via VHF, HF, Inmarsat, or any available communications channel.

2. Correlate

Alert pushed to Ciena NMS via gRPC. At-risk services automatically identified. Coherent fibre sensing and wet plant API data correlated with vessel position. Fault location determined using PFE data for shunt faults.

3. Respond

Operator acts from single console. Customers notified automatically via escalation matrix. Vessel contacted by Starboard's 24/7 maritime safety centre. Services re-routed where necessary. Maintenance requested.

4. Restore

Cable repaired. System automatically re-characterised via Ciena's cable management system. Services restored and new baseline captured. Legal compensation process initiated with full evidence package.

We acknowledge the contribution of Ciena and Southern Cross Cables Limited—firm believers that protecting critical maritime infrastructure can be enhanced by examining and adopting innovative new approaches.

starboardintelligence.com
Starboard APAC | Wellington, New Zealand
Starboard USA | Washington DC

Operational detail and broader applicability

Starboard Maritime Intelligence

204
cable repairs recorded in 2024

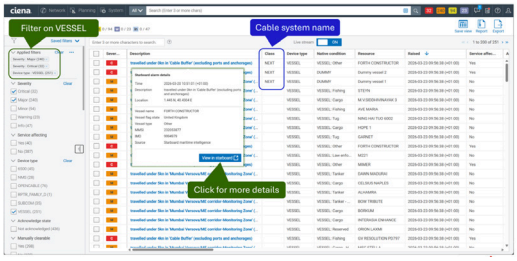
86%
caused by fishing and anchoring

3,000+
repairs over the last 17 years

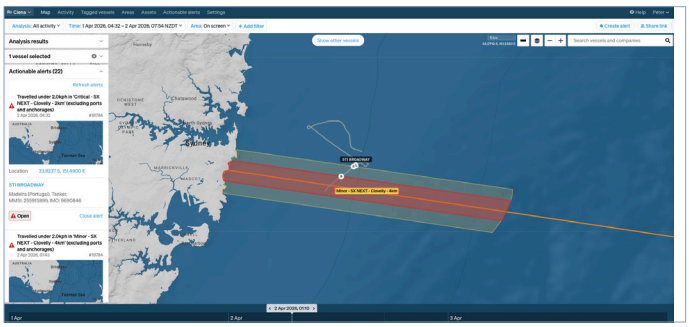
25 → 3 min
operational response time

Inside the integration

Vessel related alarm pushed into transport NMS



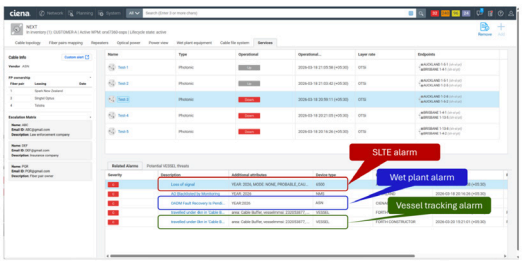
Vessel-related alarms pushed from Starboard into the Ciena Navigator NMS. Operators can filter by device type "VESSEL" and see vessel name, MMSI, flag state, location, and severity alongside standard cable alarms.



Detailed Starboard vessel view accessible via one-click from the NMS alarm. Shows vessel position, track history, ownership, risk indicators, and actionable alerts for the Southern Cross NEXT cable system.

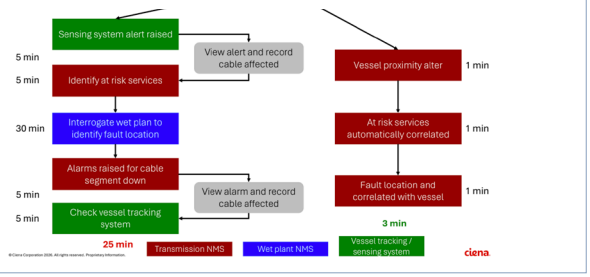
Impacted services and fault correlation

Impacted service showing related faults



Ciena Navigator showing potentially affected services on the cable system, with service status, and related alarms from SLTE, wet plant, and vessel tracking, all correlated in a single view.

Operational activities without and with system integration



Operational comparison: without system integration (left), fault assessment requires 25 minutes across three separate systems. With integrated Starboard–Ciena workflow (right), the same assessment completes in approximately three minutes with automated correlation.

Technical integration

gRPC API integration

A Remote Procedure Call API links Starboard's AIS vessel tracking system with the Ciena transmission NMS. Alerts configured in Starboard with custom zones, vessel types, and thresholds flow directly into Navigator as alarms with full metadata.

Wet plant correlation

Integration with the wet plant element management system gives operators end-to-end visibility, from backhaul through wet plant to backhaul, enabling enhanced fault-to-service correlation across the entire cable system.

Coherent fibre sensing

Coherent modem data from the SLTE provides an additional sensing layer, detecting external activity near the cable. This data is correlated with vessel position and wet plant data to localise faults and identify probable cause.

Broader applicability

This integration model applies to any critical maritime infrastructure where the cost of a fault dwarfs the cost of prevention: telecommunications cables, power interconnectors, and oil and gas pipelines. For an industry built on redundancy and resilience, continuous intelligent threat monitoring embedded in operational systems is the missing layer — for both commercial operators and government maritime authorities. Starboard tracks vessel activity using AIS, VMS, radar, and satellite data, profiles risk based on ownership, behaviour, and history, and when risk is detected, its 24/7 maritime safety centre can contact the vessel directly.

Richard Norris is presenting this case study at the 2026 ICPC Plenary in Athens. Further detail planned for Submarine Networks World in Singapore. Contact Starboard Maritime Intelligence to discuss how this capability applies to your infrastructure.