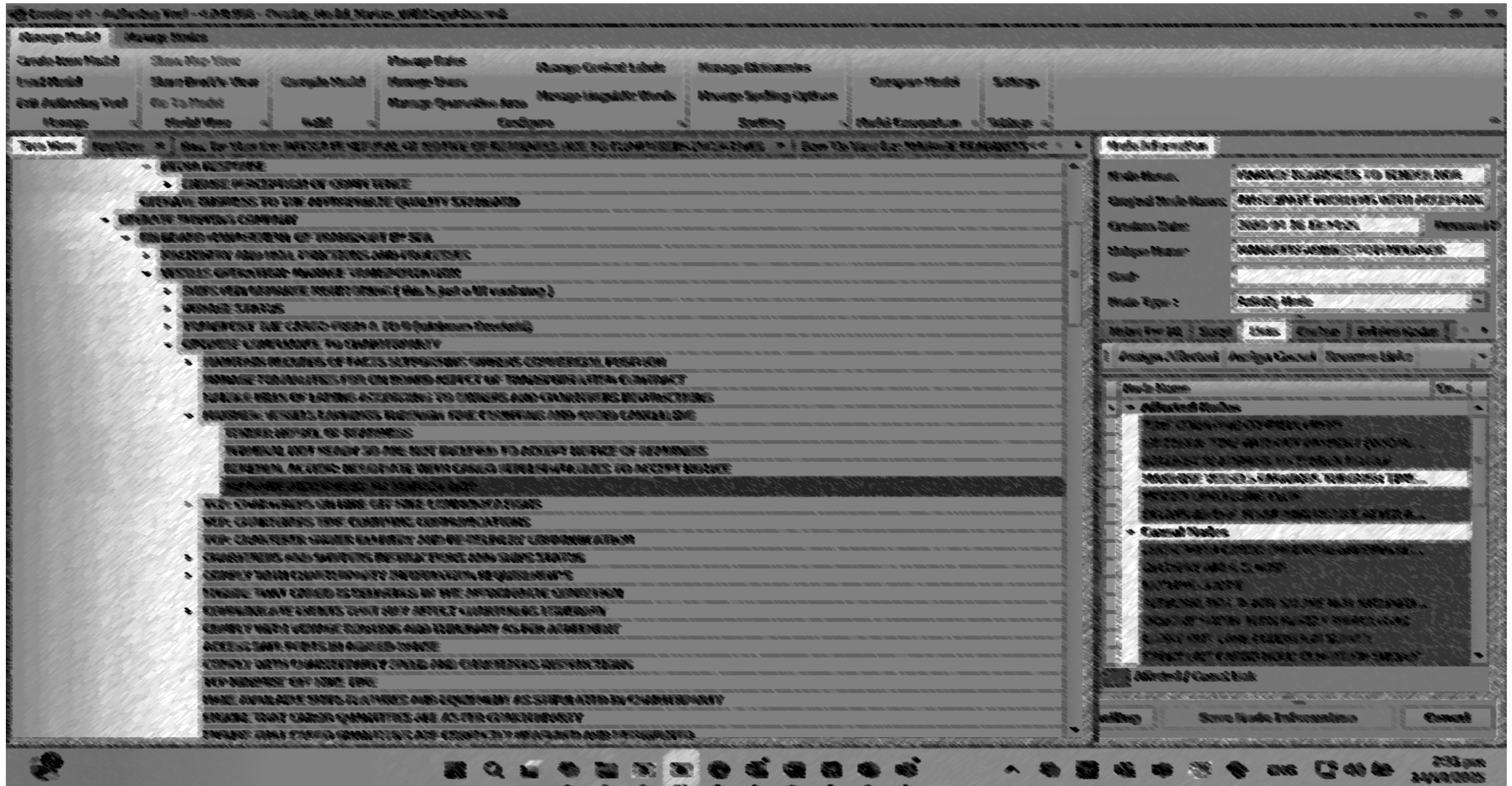


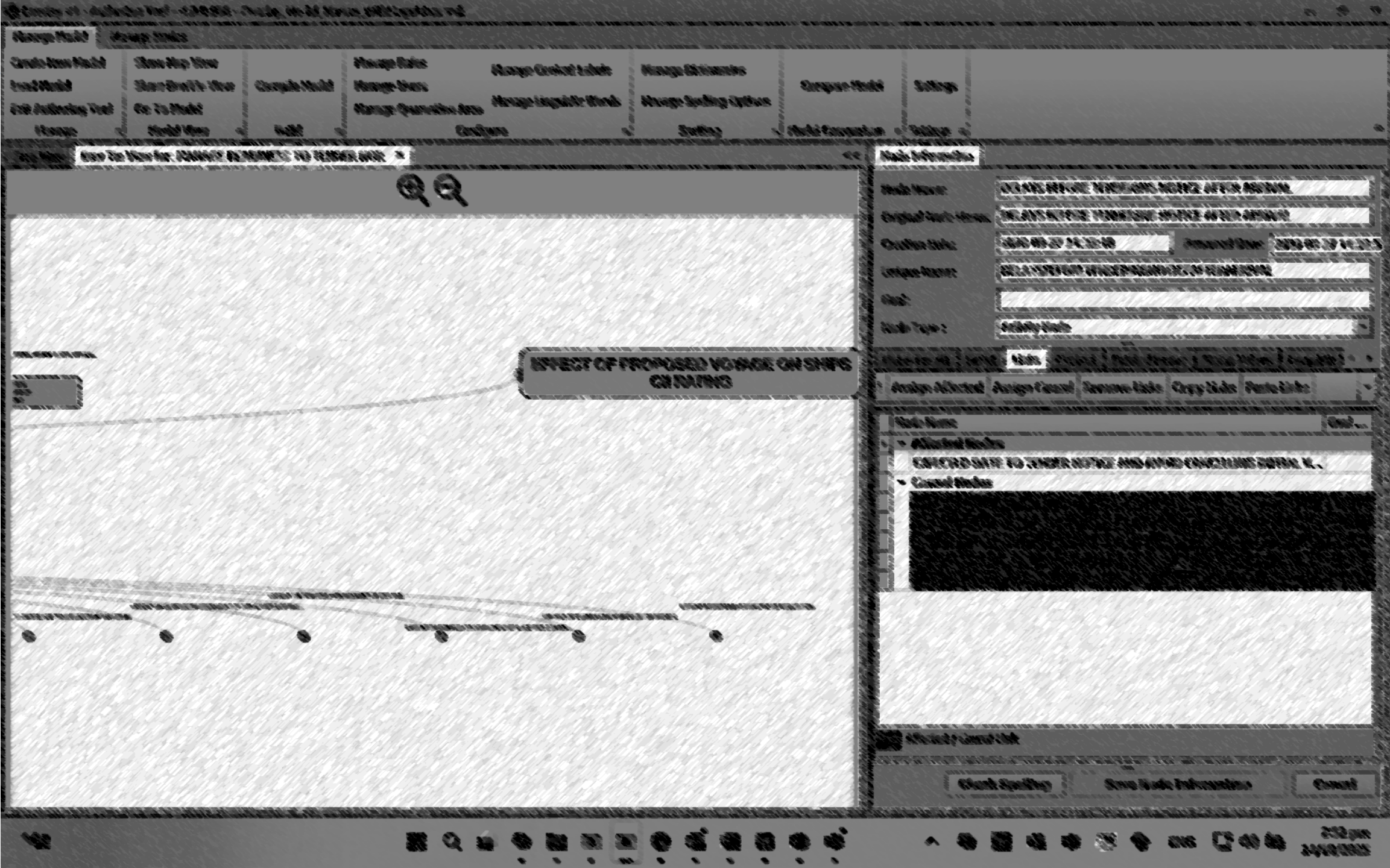


Modelling that helps in **decarbonisation**



by Dimitris Lyras
Director Paralos Maritime Corp.
Founder of Ulysses company





Environment Today - Cyber and Signal Threats



<https://www.dnv.com/expert-story/maritime-impact/>

Tackling a growing cybersecurity threat

[DNV Maritime Cyber Priority Report 2024](#)

Survey among more than 500 maritime professionals

DNV experts warn that many are **underestimating** the scale of the threat and should take extra steps to protect their assets.

Environment Today - Cyber and Signal Threats

Cyber Attacks rising rapidly

31% of maritime professionals
reported at least 1 attack in 12 months

37% of maritime professionals
expect a significant rise in the next 12 months

Increasing cyber threats

7 out of 10 leaders of maritime organizations consider
cybersecurity to be the greatest risk today and that they are
vulnerable

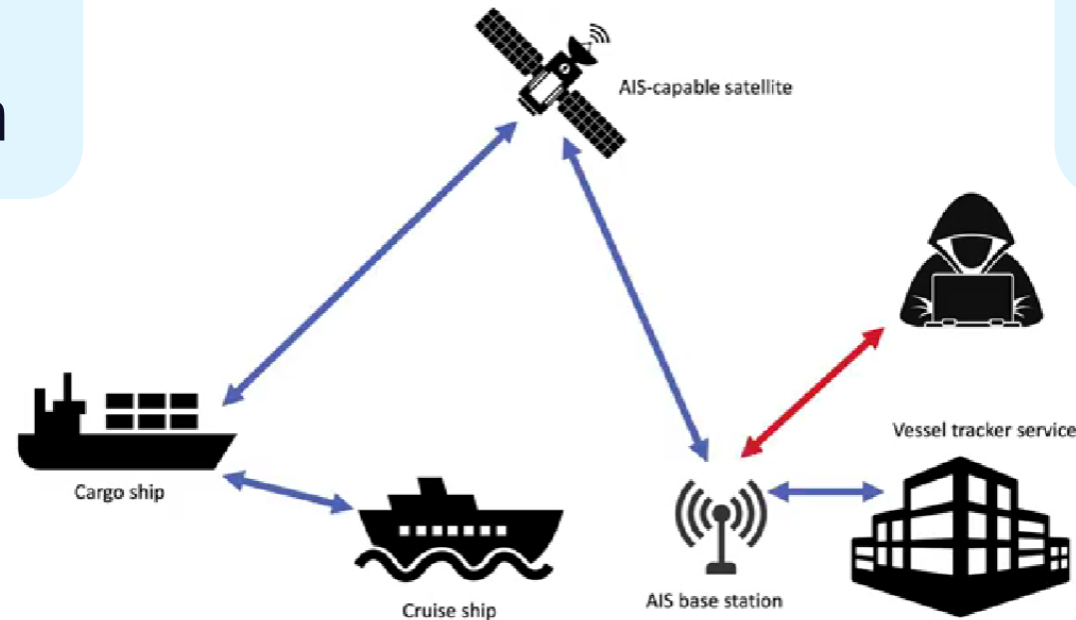
Cyber Attack example – AIS SPOOFING

Hackers differentiate

- position,
- navigation
- timing information

How easy is it?

VERY EASY! GPS signals are weak and unencrypted



Cyber Attack examples

Infrastructure

Voyager Worldwide, Dec 2022

Hack in IT systems. All systems went down for hours

PLAY, Dec 2022

Suffered ransomware damage

DNV, Jan 2023

Ransomware attack– 15% impact on the whole of customers / fleets

Port of Lisbon, Dec 2025

Suspended for four days.

Stolen data value 1.5M

Ships

Lab Dookhtegan Cyber Attack, Mar 2025

on Iranian Oil Tankers:

116 Iranian Oil Tankers were hacked

All external and internal communications were disrupted

Cyber Attack in the Military

17 March 2025

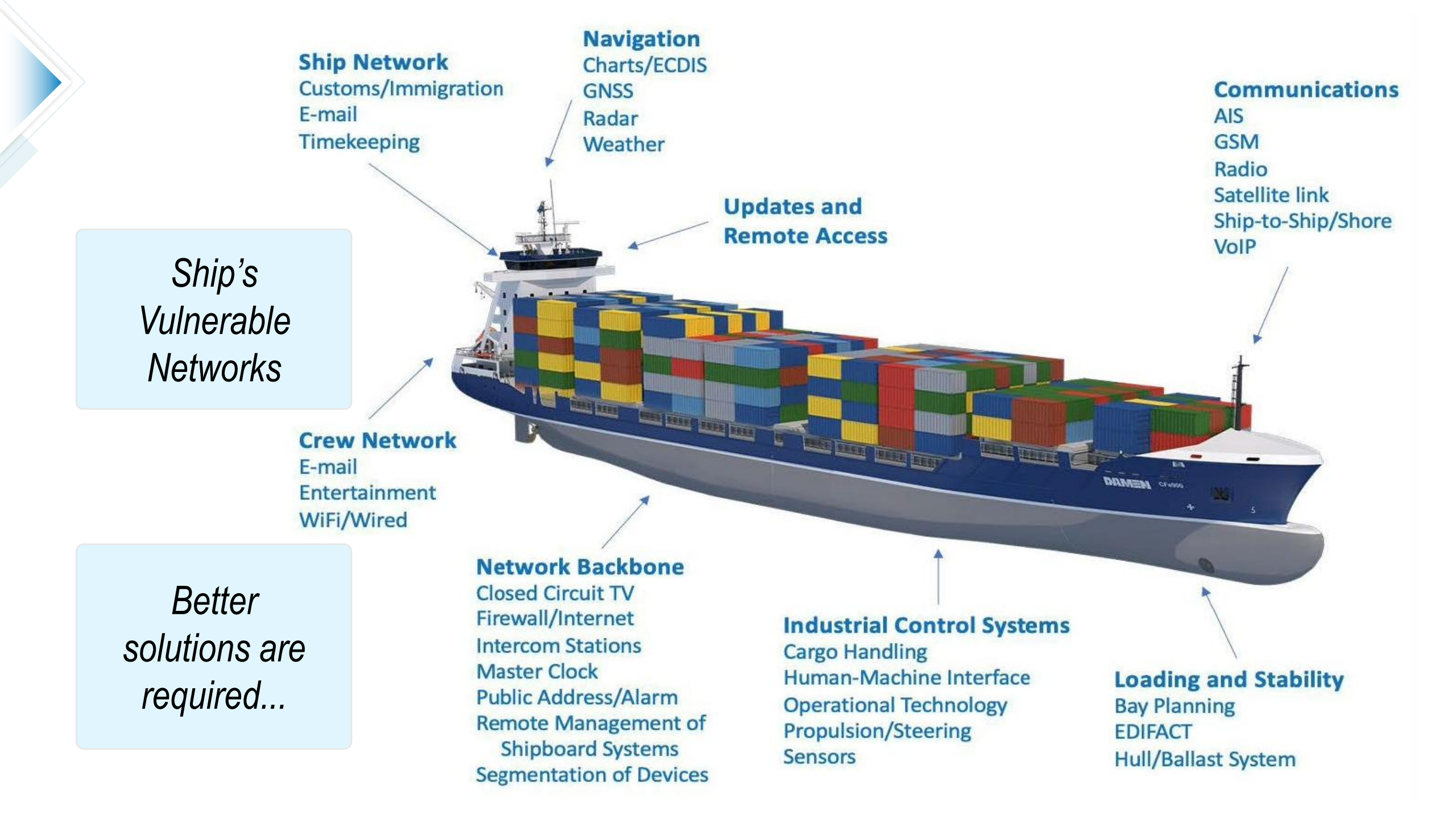
US Solong – MC Stena Collision

Was it AIS spoofing?

Portuguese flag ship collided with a US military oil tanker triggering a massive explosion

[Other eminent examples](#) in Lebanon, Libya and the Eastern Mediterranean.

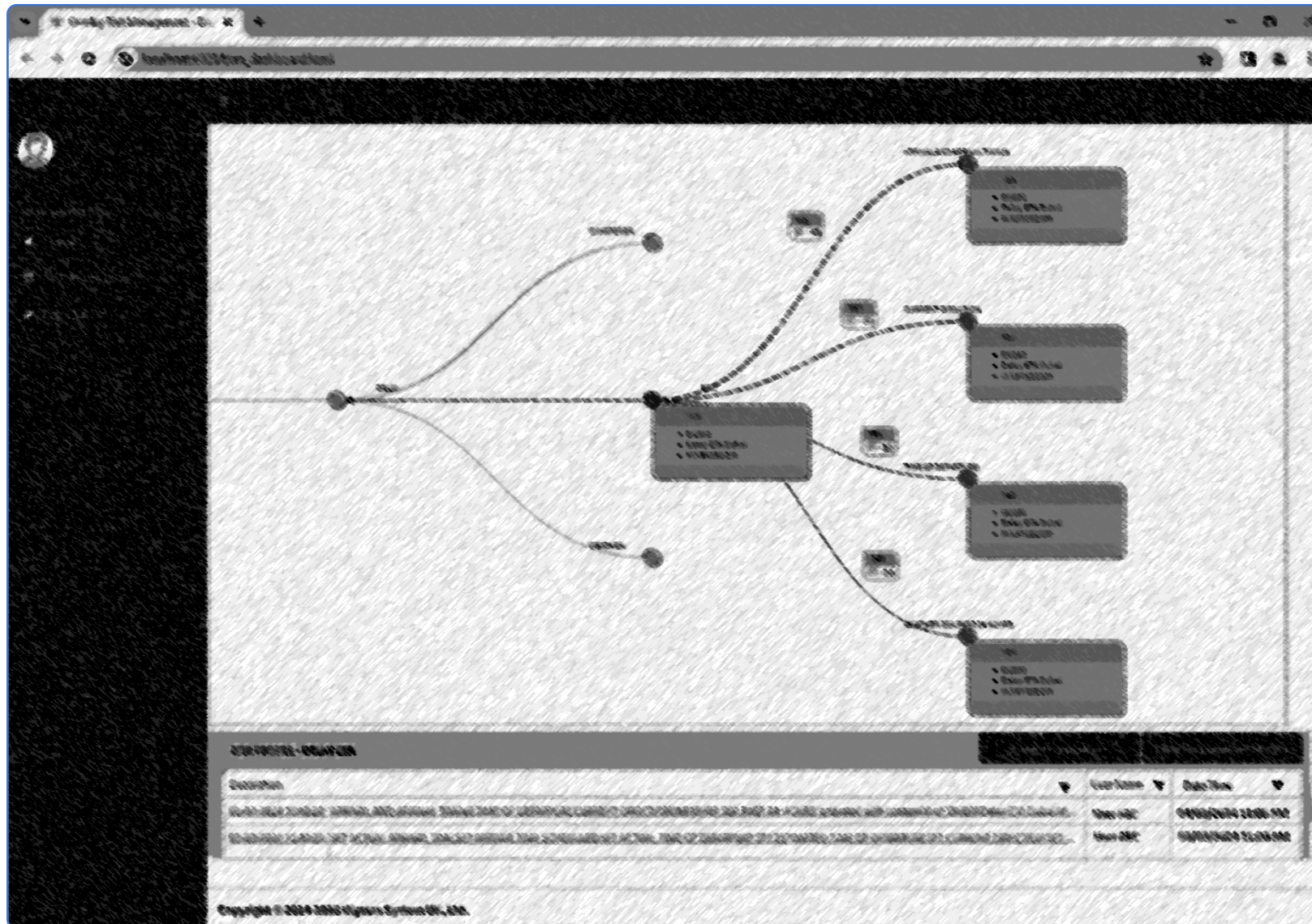




Cyber Attack Mitigation Measures

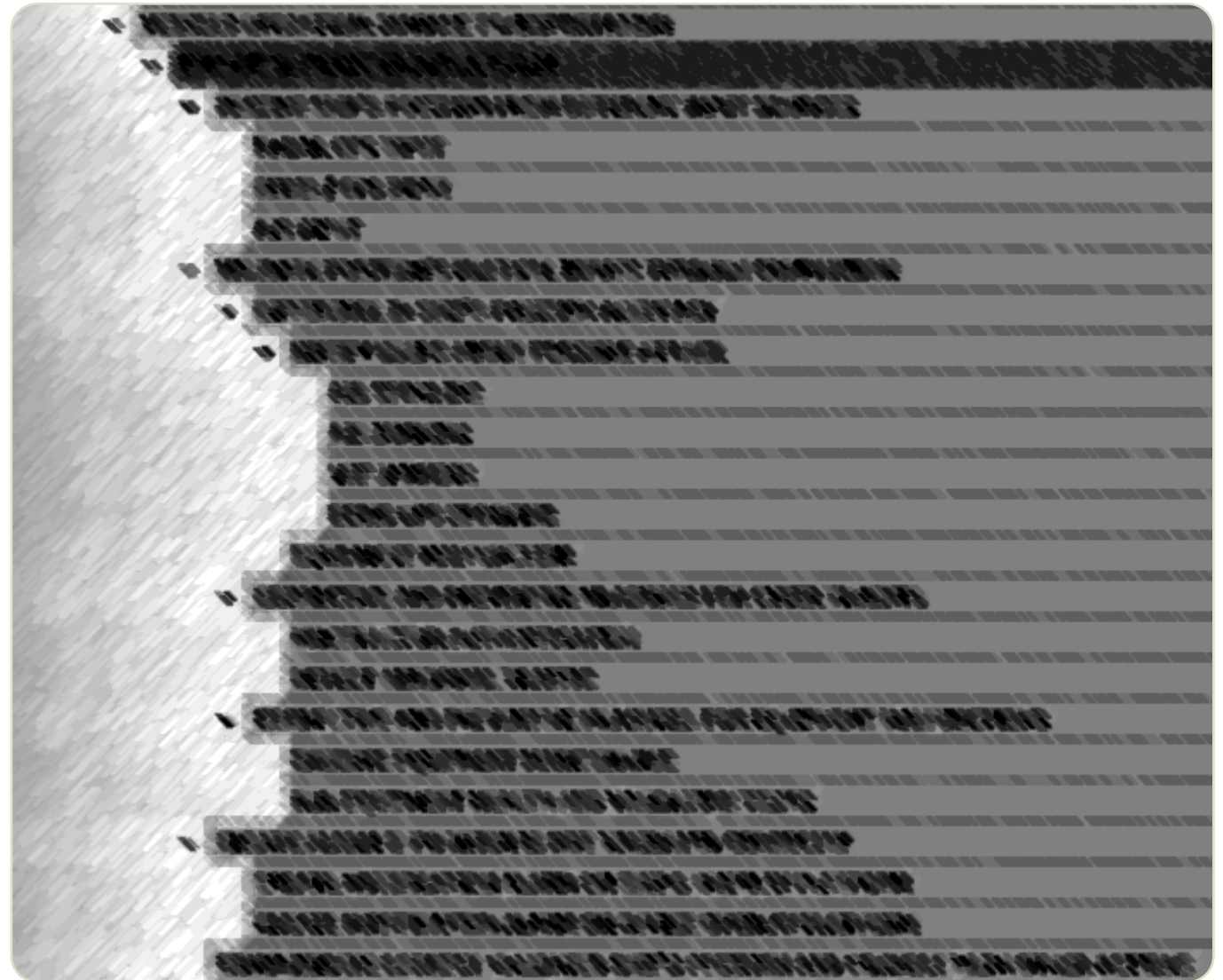
- Prioritize cyber security in maritime companies' environment.
- Enable Proactive measures – Create effective Cyber Security Risk Management solution.
- Install a dedicated maritime cybersecurity solution that is independent of communication devices and protects all external and internal network traffic.
- **Employ GNSS Denied Environment machines...**
- **Use innovative technology** that utilizes AI techniques/models in order to dynamically safeguard communication systems. <https://marpoint.gr/blog/cyber-attacks-in-shipping-the-unknown-global-threat/>





Cyber Secure Navigation Model

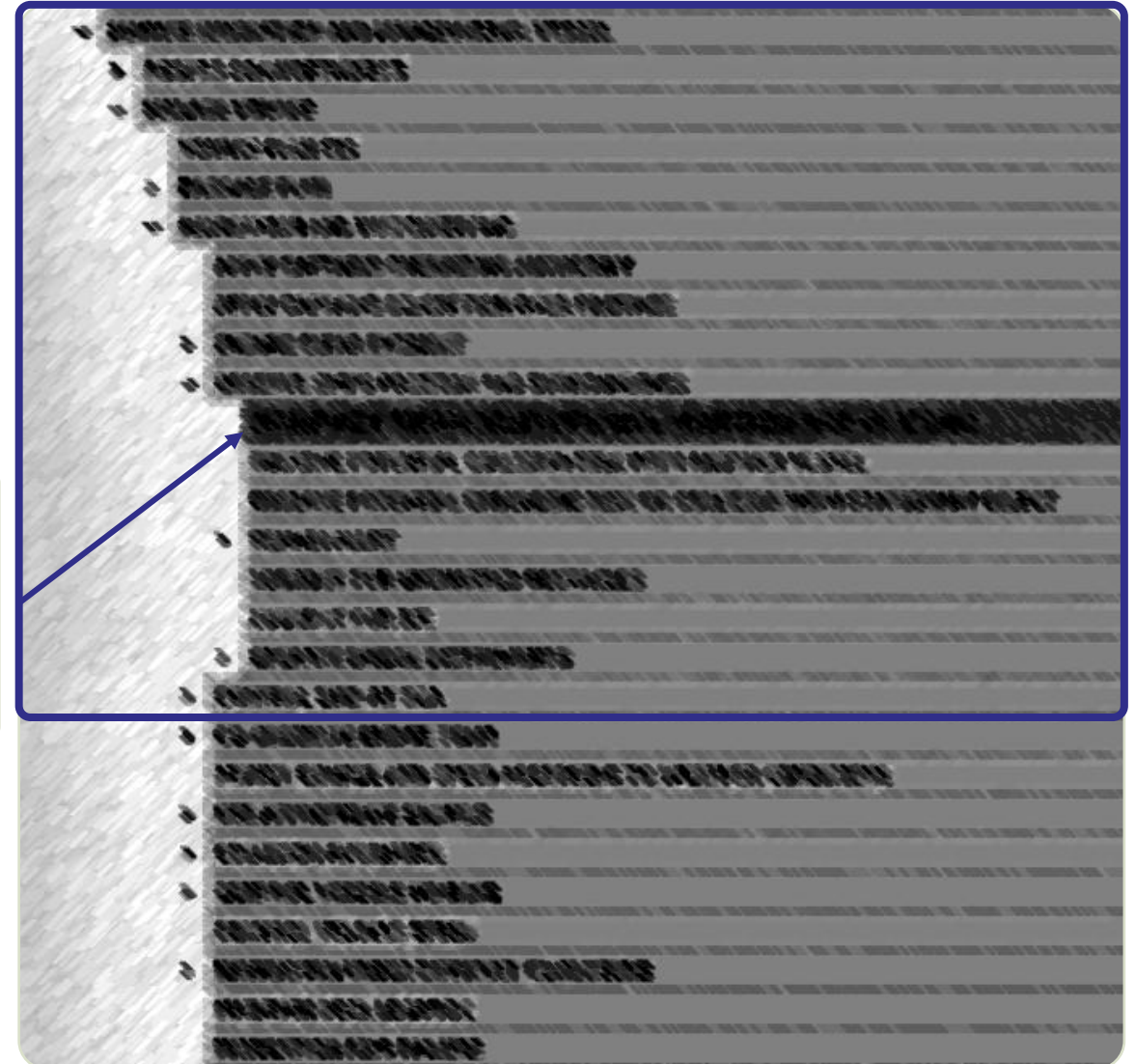
A tree view of the
Cyber Attacks Monitoring
and Integration Model



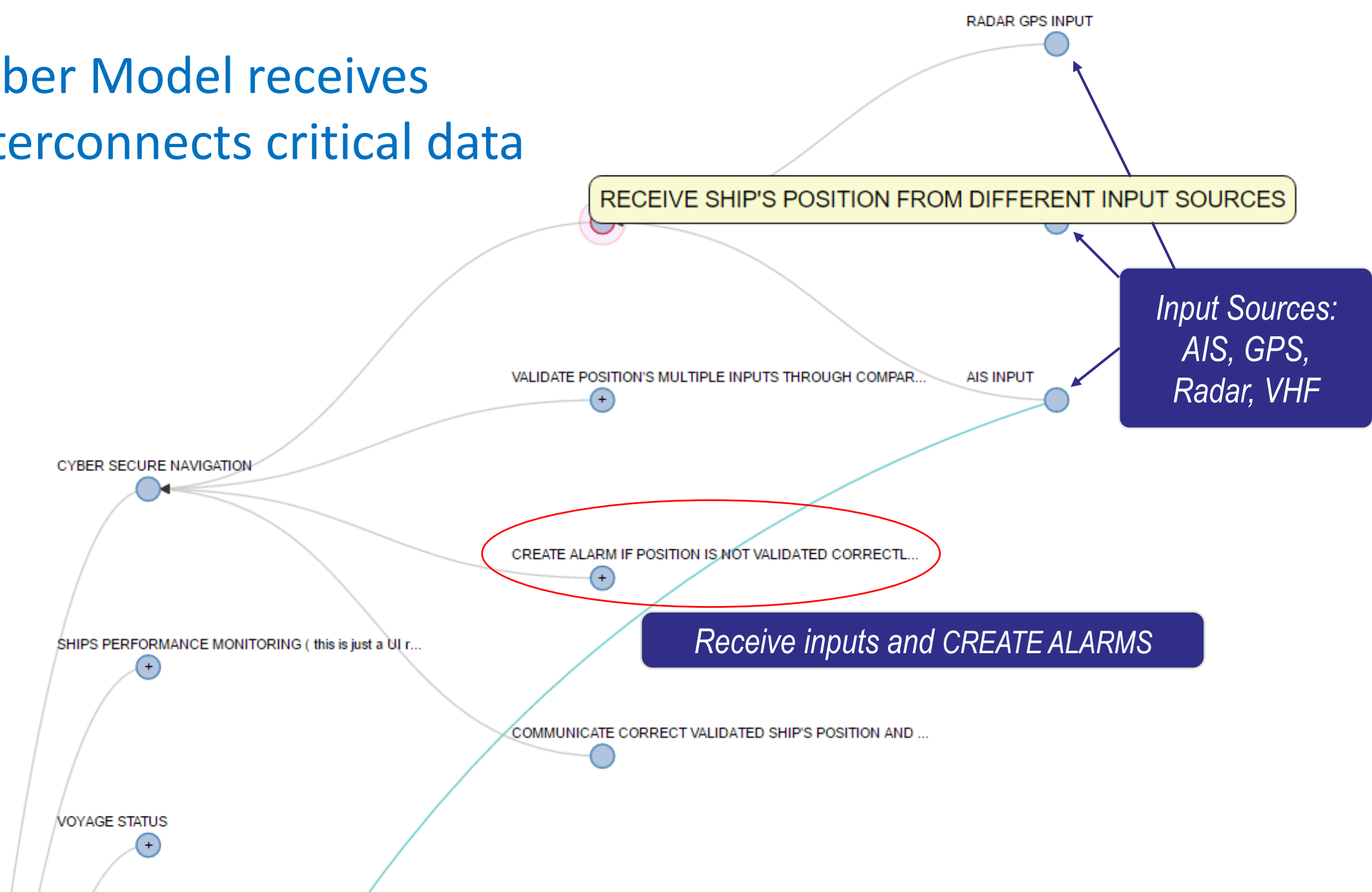
Cyber Model Affects Navigation Model

The Cyber Model
is connected in
real time with the
Vessel Operations Model

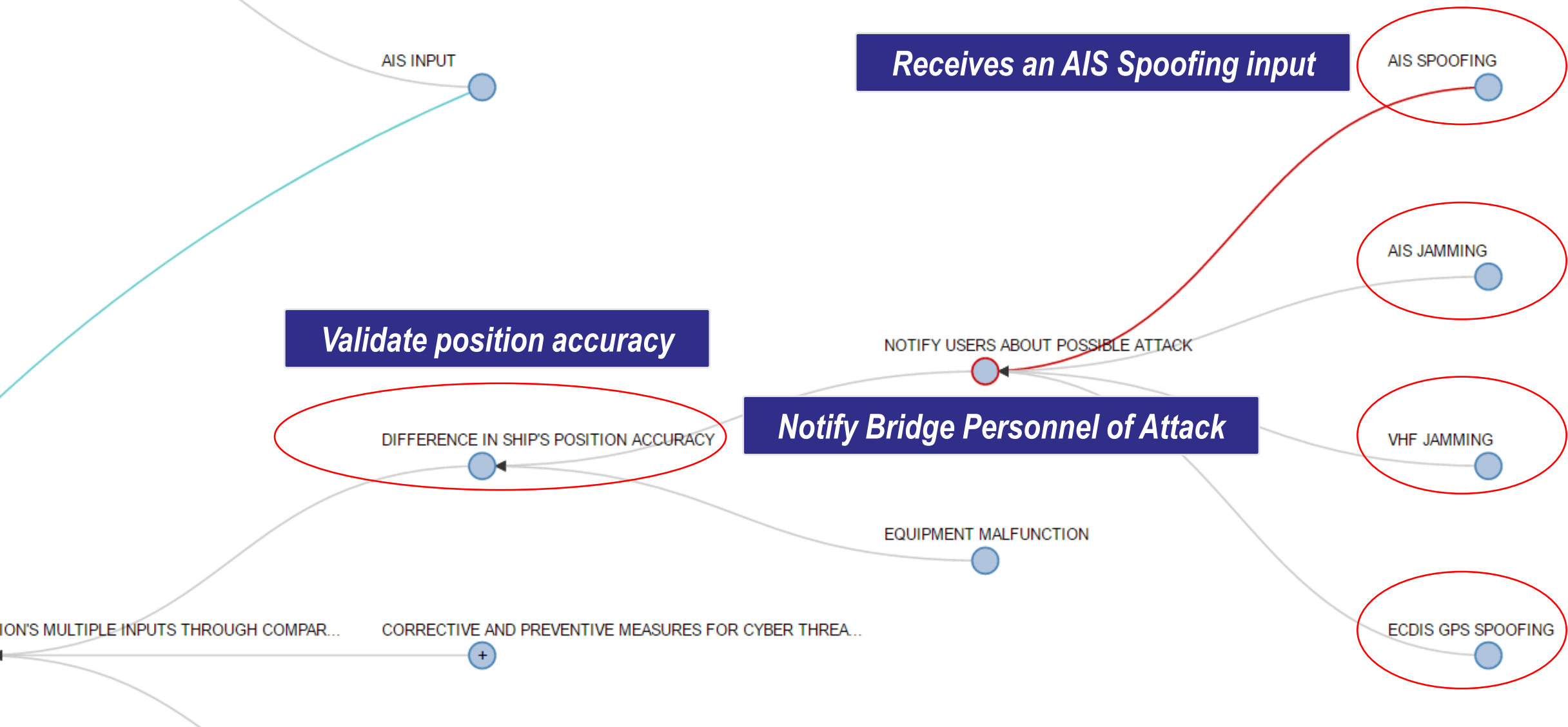
providing and maintaining
awareness in navigation



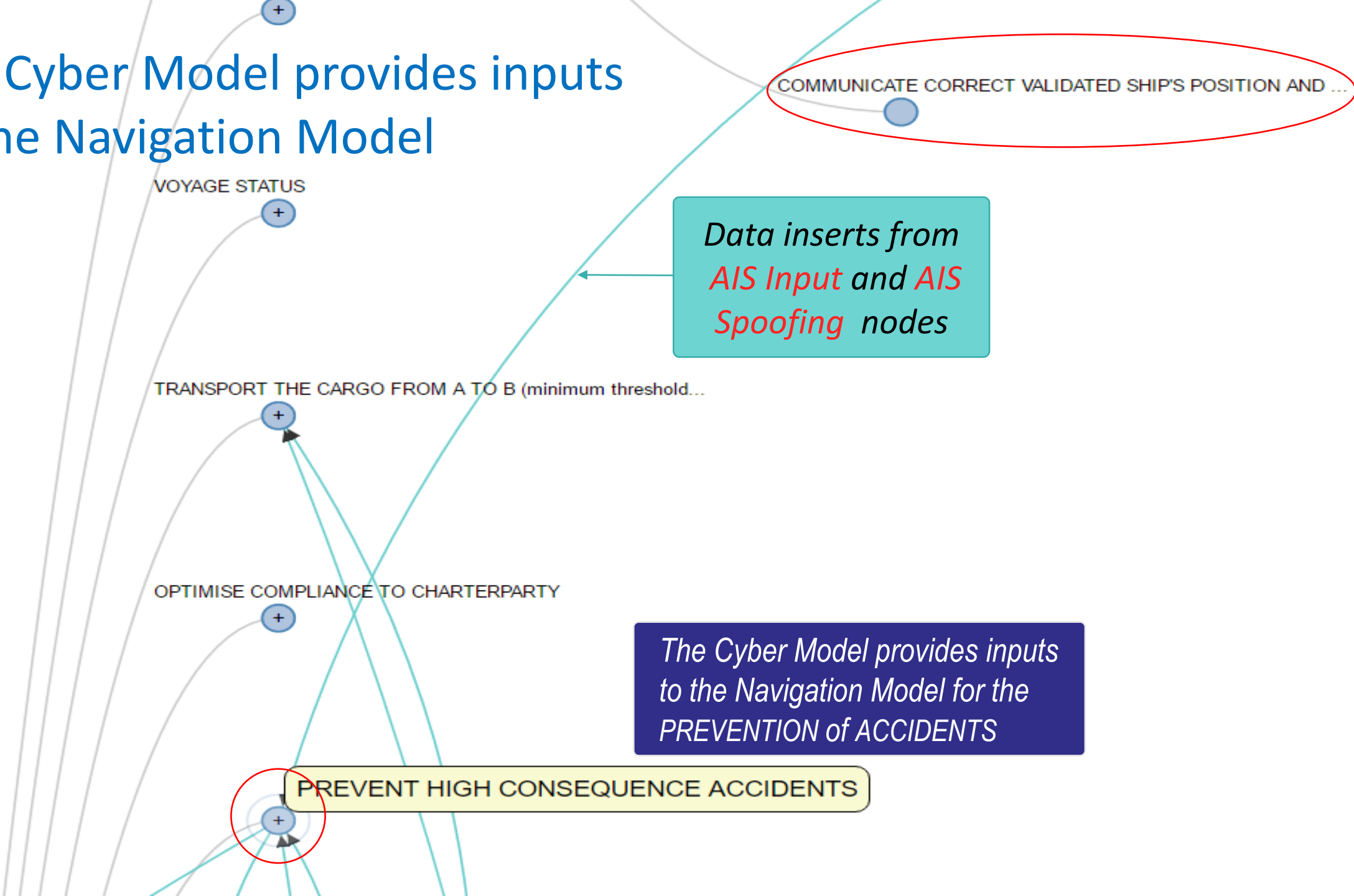
The Cyber Model receives and interconnects critical data



The Cyber Model receives and interconnects critical data



The Cyber Model provides inputs to the Navigation Model



Thank you!

Since 1996, Ulysses Systems is a leader in software innovation for the Maritime Industry, providing management solutions to ship-owners and ship managers. Its award winning software, Task Assistant® enables both office and seagoing personnel to work intuitively, efficiently and effectively. Class certified by DNV, Bureau Veritas and ClassNK, Task Assistant® is designed to require minimal training. Managers should expect a fast return on total software lifecycle cost from reliable and mature process optimization and minimization of information gaps.



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