



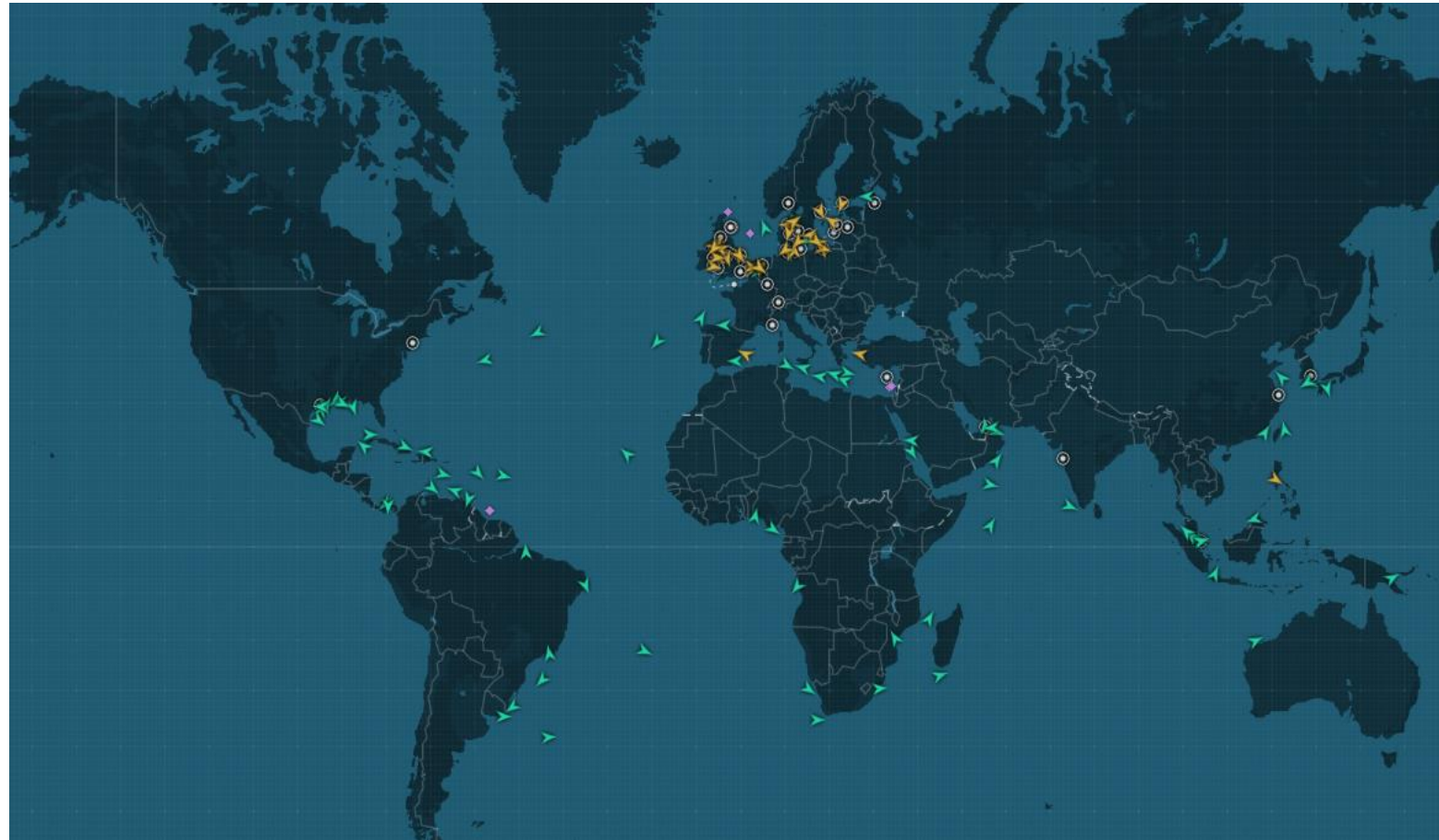
SD-Wan

**The way to meet the future
demands in Ship Communications**

Urban Lundberg Stena AB
Service manager Vessel communications

Stena AB

- Stena Line
- Stena Bulk
- NMM
- Stena RoRo
- Stena Teknik
- Stena Drilling
- Stena Property
- Envac
- Stena Adactum
- Stena Metall
- + many more
-



Stena AB

- Privately owned by the Olsson family
- Dan Sten Olsson. Owner and CEO
- Started in the 1950s as a Scrap metal company Stena Metall and it is still a prosperous part of the Stena Group



Stena Line



Intro

- Vessel communications technology evolves
- We need to be able to adapt new technology without doing a complete rebuild
- Cost effectiveness, both for installation and running costs
- Choose the right technologies for the chosen traffic
- High redundancy

Past

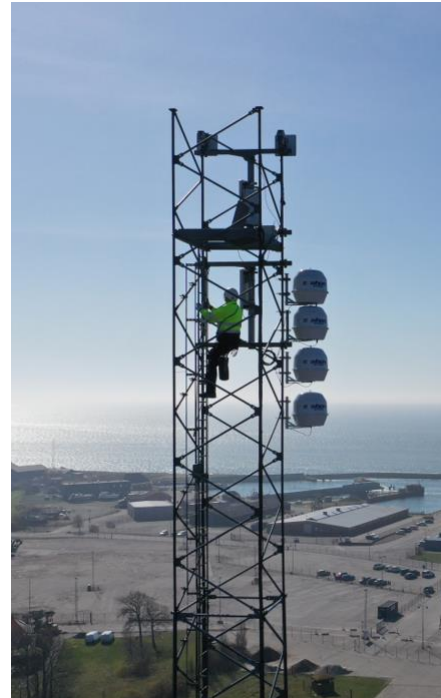
- Data Carriers. Ship-Shore harbour communication + Vsat, 4g and Iridium
- All with Legacy network Routing
- Varying delay, lot of short outages when jumping between carriers, not always utilising the most efficient carrier

SD-WAN the new standard

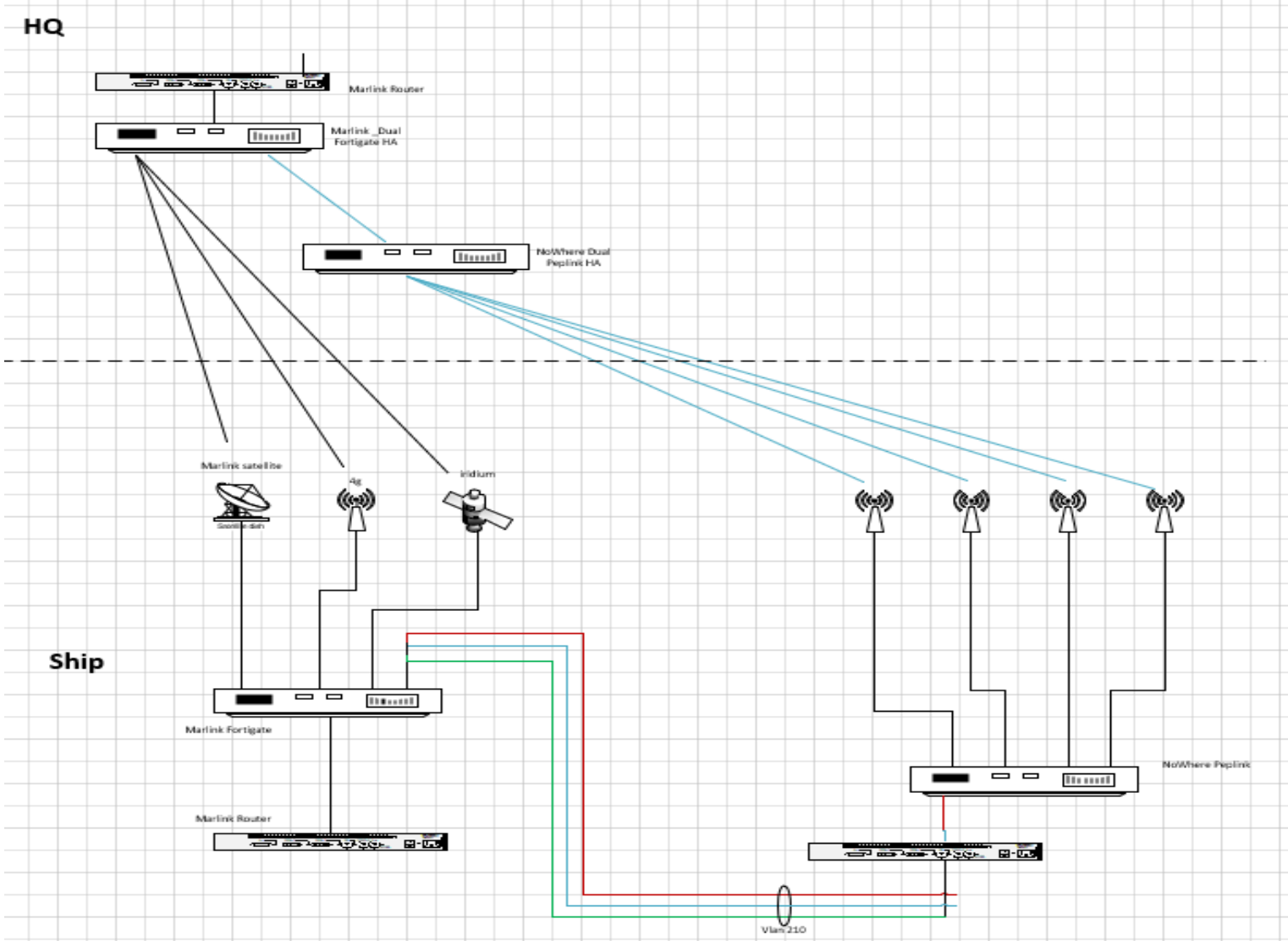
- Use all carriers at the same time, always up
- Use best suited carrier for the different data streams
- Seamless redundancy for traffic between the different carriers
- Use cost effective carrier for bulk data such as mail
- Use most stable carrier for voice and realtime data
- Use expensive backup for only the most important data, for example CreditCard transactions over Iridium

Solution

- Develop platform together with Partners
- Marlink and Nowhere Networks
- Fortigate SD-WAN
- RadioLinks with trackers
- What about LEO?

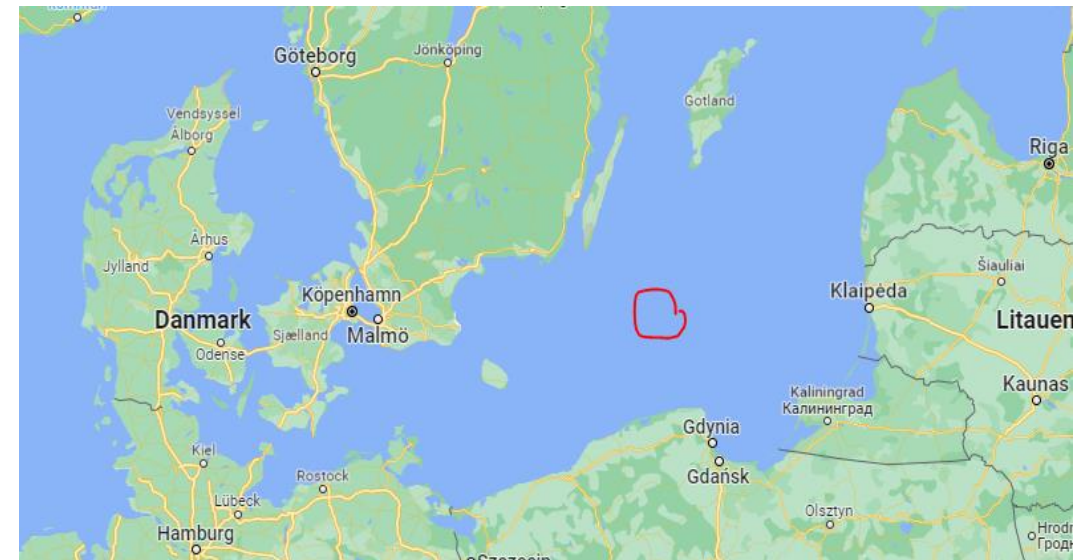


Design of network



Radiolink Technology

- Landbased trackers along the route of the ship
- Ships have 4 trackers
- Ship is always connected to at least 3 different trackers on shore
- Bandwidth will be minimum 100mb and is possible up to 400mb
- No need for extra harbour zone connections
- Vsat still needed for redundancy and for long sea crossings far from shore, for example Baltic sea
- SD-WAN will seamless hand over traffic to VSAT when ship is out of reach



Questions

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