

Final Presentation of the NAVISP EL1-057 Project

Development of advanced VDES-R User Technologies for alternative PNT

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Enabling the Maritime Sector from Space

Earth
Observation



(Integrated Terrestrial &)
Satellite
Communications



Satellite
Navigation



**Connectivity and Data Exchange:
Essential for
Transformation of Marine Operations**

Automatic identification system (AIS) technology has had a great positive impact in maritime safety and security

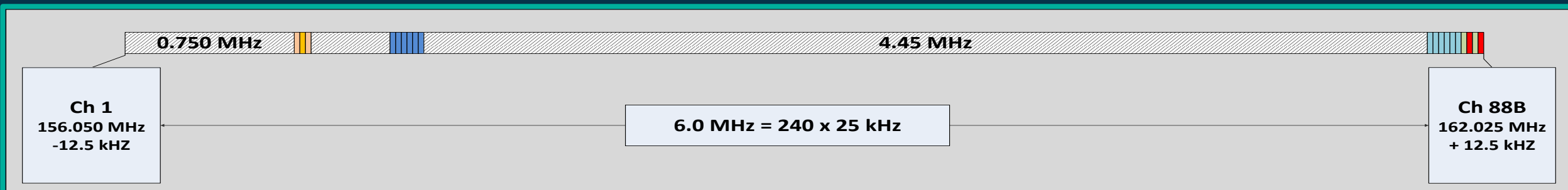
- Occupying less **than 1.7%** of the entire VHF marine frequency bands
- Relatively affordable equipment and service cost

Increasing AIS Technical Challenges

- Extremely populated AIS network cells close to high traffic zones (busy harbours, popular passages, etc.)
- AIS overload due to exchanging messages

VHF Data Exchange System (VDES):

- Enhanced use of spectrum for data exchange
- Enables two-way communications
- Protection of AIS from overloading (due to the message exchange)
- An integrated use of terrestrial and satellite components



A satellite view of Earth at night, showing the curvature of the planet and the glowing lights of cities and continents. The horizon is visible at the top, and the Earth's surface is covered in a dense network of yellow and orange lights.

Thank you!

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