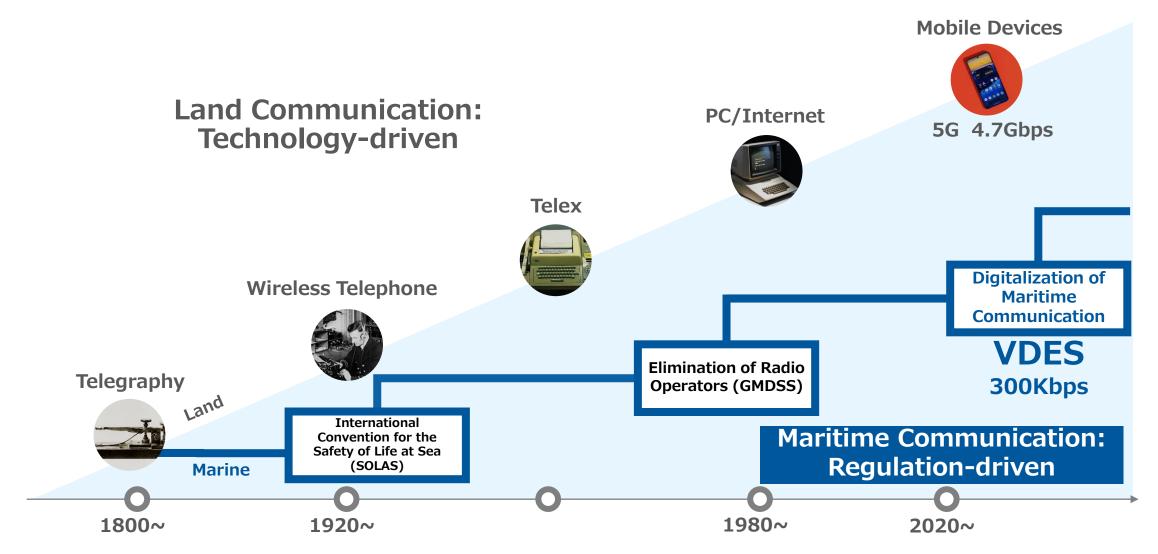
Emergence of VDES



After more than 40 years of regulatory delays, a new maritime communication standard has emerged.



Current Maritime Communications

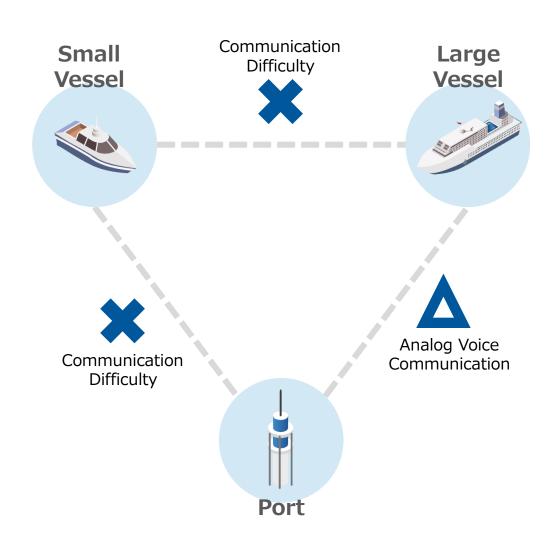


▼ Issue:

Absence of Common Communication Platform

- ✓ Small ships and large ships cannot communicate.
- ✓ The port is unable to monitor the movement of small vessels.
- ✓ Large vessels and ports still communicate via analogue voice, and a human error occurs.

Establishing digital communication infrastructure and services suitable for maritime use is essential.



Next-Generation Maritime Communication and its Challenges



VDES (VHF Data Exchange System) is a <u>legitimate communication system</u> for marine mobility. It is the world's first standardized <u>digital communication system</u> for maritime transport, an <u>extension of the AIS transponder</u> used by ships. VDES allows the transmission of location information as well as sending and receiving SMS and data.

▼VDESの機能

AIS

Vessel Location and Navigation Information

ASM

Short Messages (broadcasting to specific vessels and waters)

<New Function>
VDE

Data Transmission and
Reception
(broadcasting to a specific or
whole vessels)

<New Function>
SAT

Communication
via VDES Satellite
(transmission area
expansion)

▼ Issue:

Barriers to Introduction

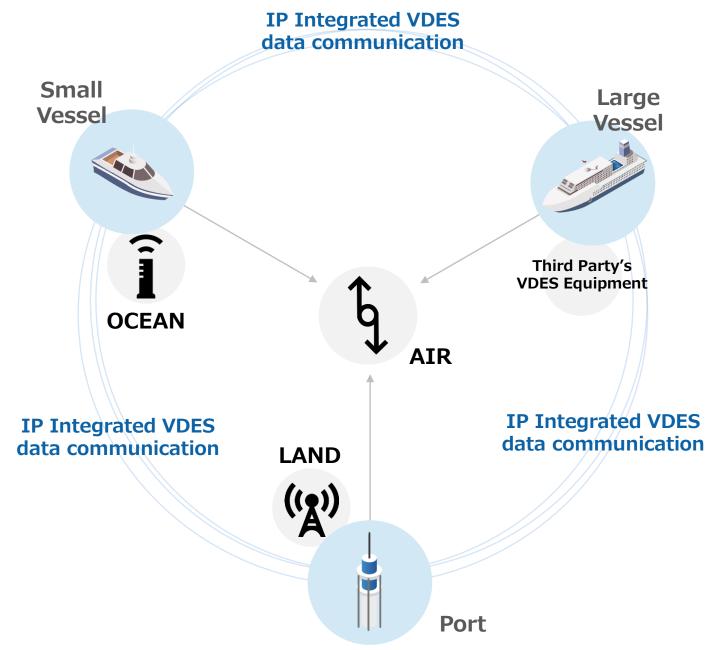
- ✓ VDES equipment (34-41 thousand USD/unit) and SAT function (10 thousand USD/month) are expensive.
- ✓ Installation and use of radio equipment requires permits and approvals.
- ✓ Standard functions only allow sending and receiving messages.

It is crucial to minimize obstacles for the implementation.



Realization of **Smart Ocean** by integrating VDES and IP

CoastaLink®



2024/1/23