

Ocean-space collaboration for maritime safety and security
Seven companies and OPRI launch the Satellite VDES Consortium in Japan

TOKYO, October 13, 2022 — IHI Corporation, MOL Techno-Trade, Ltd., Furuno Electric Co., Ltd., ArkEdge Space Inc., TST Corporation, Japan Radio Co., Ltd. (JRC), Mitsui & Co., Ltd. and the Ocean Policy Research Institute (OPRI) of the Sasakawa Peace Foundation (SPF) have launched the Satellite VDES Consortium to support efforts to meet the growing demand for a more reliable and accessible infrastructure for digital communication at sea.

The inaugural meeting of the consortium was held on October 13, 2022, following the approval of the official rules and the appointment of chair and co-chairs. Mr. Akira SHISA (IHI Corporation) was assigned as chair of the consortium, Mr. Yoshihiro SANO (MOL Techno-Trade, Ltd.) and Mr. Ichiya OGINO (Furuno Electric Co., Ltd.) as co-chairs, and OPRI as secretariat. The advice from several experts in related fields to this consortium was also confirmed.



Consortium members at the preparatory meeting (Sept. 15, 2022)

Advisors of Satellite VDES Consortium

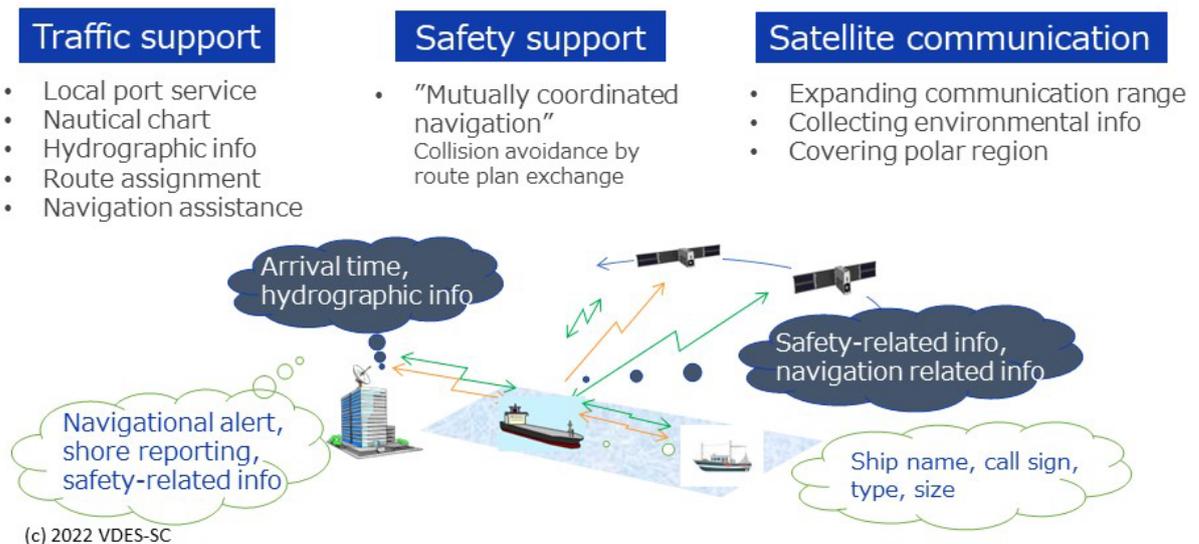
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Satellite VDES

The VHF Data Exchange System (VDES) is a revolutionary maritime digital communication system to construct a network connecting vessels at sea and ports. VDES can provide two-way communication and up to 32 times higher data rates than Automatic Identification System (AIS), the current system used to identify vessels for logistics and shipping management. Furthermore, VDES communication via satellite is expected to improve maritime safety and security on a global scale and support real-time navigation and communication.

Satellite VDES Consortium

The Satellite VDES Consortium aims to create a platform to facilitate the commercialization and promotion of Satellite VDES through partnerships between industry, academia, and government. The consortium's work is expected to enhance Japan's presence in the international maritime community and to accelerate digital transformation (DX) in the ocean sector. Activities will include discussions on the use-case and business model, on-site experiments of terrestrial VDES, and development of application services utilizing these satellites.



Conceptual image of Satellite VDES use-cases

Ocean Policy Research Institute (OPRI), Sasakawa Peace Foundation
(<https://www.spf.org/en/opri/>)

OPRI is a think tank that conducts ocean policy research, makes policy recommendations, and disseminates information in order to comprehensively and systematically address the ocean challenges facing Japan and the world. As part of this work, OPRI conducts research on the sharing of ocean observation platforms and the spread of satellite communications to enhance marine security and maritime domain awareness, with the aim of building a maritime digital society.

IHI Corporation (<https://www.ihico.jp/en/>)

IHI, as a comprehensive heavy industry group, is committed to solving customers' problems using the company's engineering capabilities centered on manufacturing technology. IHI is also engaged in space utilization business using satellite information and data, based on the management philosophy of "contributing to social development through technology" in order to create a world where nature and technology work in unity.

MOL Techno-Trade, Ltd. (<https://www.motech.co.jp/en/>)

MOL Techno-Trade, Ltd. is a company within the MOL Group that functions as a technology-specialized trading company, and is engaged in a wide range of businesses, including the sale of Propeller Boss Cap Fins (PBCF), which are energy-saving devices; procurement of fuel, lubricants, ship parts, and materials; and the management and maintenance of national oil terminals. The company aims to be the No.1 technology-specialized trading company that contributes to environmental protection and maritime safety while developing maritime business.

Furuno Electric Co., Ltd. (<https://www.furuno.co.jp/en/>)

With sensing and information processing technologies at its core, the company's main business is the manufacture and sale of electronic equipment for marine and industrial use including healthcare, communication, disaster prevention, and monitoring solutions. With a business vision of "achieving better safety, security and comfort to bring about a society and sea navigation that considers the needs of people and the environment," the company will continue to contribute to customers and society.

ArkEdge Space Inc. (<https://arkedgespace.com/en>)

The company's mission is to bring the benefits of satellite development and utilization to all people through the design, development, and operation of nano-satellite constellation systems. Through the realization of early in-orbit demonstration of VDES satellites, the company contributes to the establishment of the basic infrastructure for future ship identification, safe navigation, and maritime digitalization.

TST Corporation (<https://www.toyoshingo.co.jp/en/>)

TST Corporation provides a variety of information on vessel movements and ports to government agencies and companies involved in maritime transportation and port operations/construction. The company also contributes to safe and smooth operation of

vessels and ports through port radio operations and services related to port bay management at ports nationwide, and respond to the era of digital transformation.

Japan Radio Co., Ltd. (<https://www.jrc.co.jp/eng/>)

For more than 100 years, Japan Radio Co., Ltd. has been providing navigational equipment that contributes to the safety and security of the world's oceans. In recent years, the company has been actively promoting initiatives to "digitize the entire ocean and make all of people involved in the ocean happy", such as the realization of Autonomous Ship Systems and Marine Solution Services through ship-land communications as part of the Digital Transformation (DX) approach to the ocean.

Mitsui & Co., Ltd. (<https://www.mitsui.com/jp/en/index.html>)

Mitsui & Co., Ltd. is developing its business units including mineral and metal resources, energy, machinery and infrastructure, chemicals, iron and steel products, lifestyle, and innovation and corporate development, utilizing its worldwide sales offices, networks, and information capabilities. In 2018, the company re-entered the space business and is currently engaged satellite development and launch, space station utilization, and ground station projects.

Note: This press release was updated on October 31, 2022, to remove the “scheduled for confirmation” notation, as all advisors have been confirmed.