



December 17, 2021

Mitsui O.S.K. Lines, Ltd.

JRCS Co., Ltd.

**MOL, JRCS to Research Potential of AI-based Object Recognition Technology
to Support Watchkeeping Aboard Vessels
~ Aiming for Safer Operation ~**

TOKYO—Mitsui O.S.K. Lines, Ltd. (MOL; President & CEO: Takeshi Hashimoto) and JRCS Co., Ltd. (Chairman and President, JRCS Group CEO: Koichiro Kondo; Headquarters: Shimonoseki, Yamaguchi) today announced joint research on the use of AI-based object recognition technology by leveraging each company's knowledge and technologies, with the aim of supporting watchkeeping while underway.

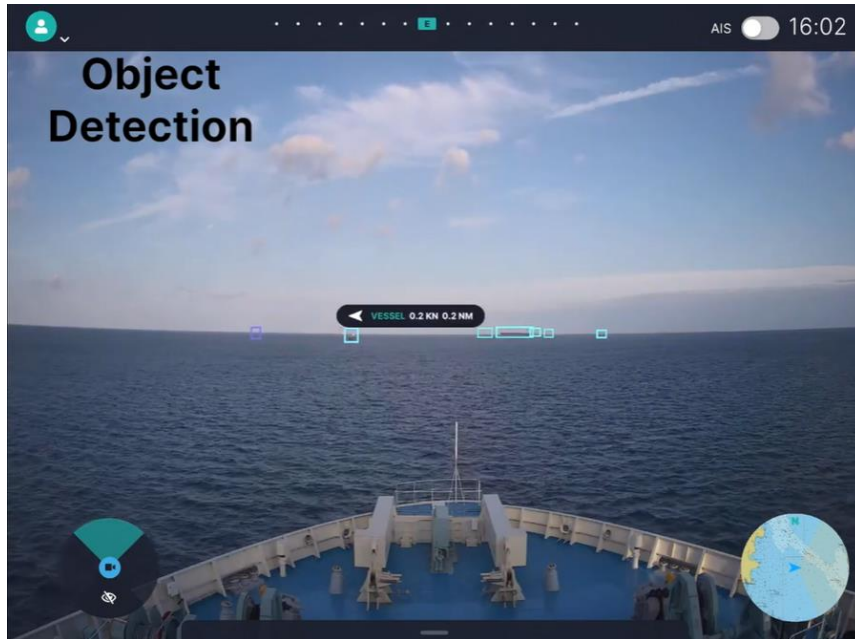
A key factor in ensuring safe vessel operation, of course, is watchkeeping by seafarers. On the other hand, objects such as fishing boats, buoys, debris, and so on cannot be detected by currently available nautical instruments such as radar. This puts extra strain on seafarers during their watchkeeping duties.

MOL and JRCS decided to research the possibility of using JRCS's AI-based object recognition (Computer Vision) technology using camera imaging for watchkeeping, with the goal of reducing the mental burden on seafarers and further improving safety.

Specifically, the JRCS product "infoceanus command," which uses its proprietary Computer Vision, will be installed aboard an MOL vessel to verify its technical capability to recognize objects, including targets undetectable using currently available nautical instruments, and its effectiveness in supporting ship operation while underway.

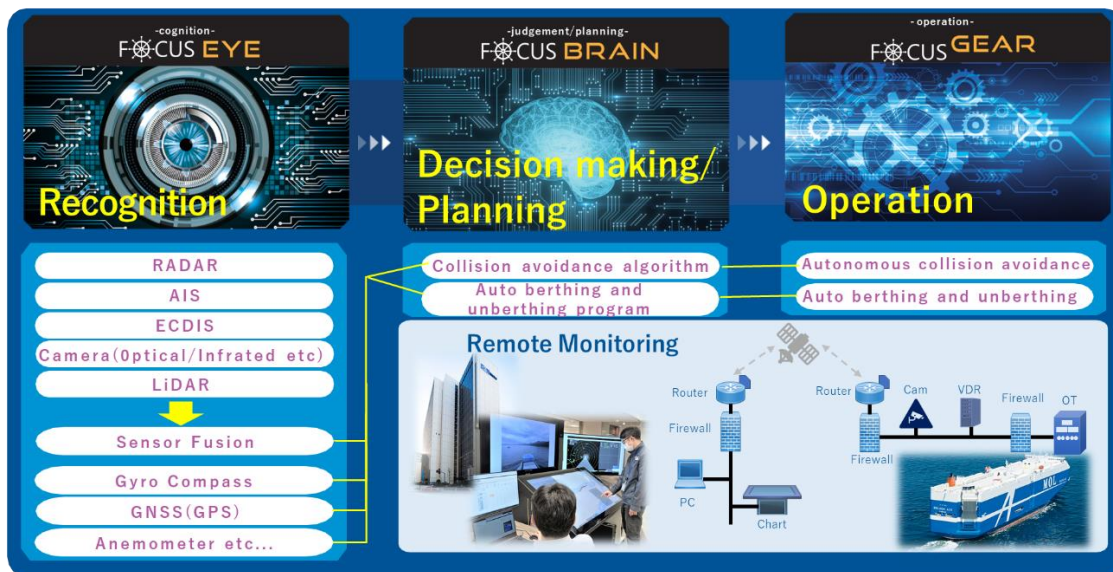
In this verification test, the companies will confirm the equipment's effectiveness at night and in low-visibility environments, particularly in situations that are stressful for seafarers, helping them estimate other vessels' positions, travel directions, and speeds, as well as the distance between them and their own vessel, with the ultimate goal of recognizing such objects during autonomous sailing (Note 1).

MOL and JRCS aim to further support ship operation and safety by reflecting the results gained in this verification in product development.



command screen image
 (Click on the image above to view the promotional video for command.)

(Note 1) MOL Activities for Autonomous Ship Operation



<Explanation of "infoceanus command">

Using JRCS's unique Computer Vision technology, vessels that are not equipped with automatic identification system (AIS), as well as buoys and debris in the water can be detected and displayed on screen based on live video. In addition, the display indicates the type of objects, the distance between them and the vessel, and relative speed.

Furthermore, information on currently available nautical instruments and AIS and electronic charts, which are indispensable during a voyage, are integrated into portable tablet devices. This ensures intuitive operation and features an easy-to-view design, allowing users to check necessary information as needed.

For details, please refer to the following website.

<https://infoceanus.com/en/>

<MOL corporate profile>

With a focus on the ocean shipping business, such as bulk carriers for various raw materials and fuels and product carriers such as car carriers, MOL develops a range of social infrastructure businesses including offshore business and wind power energy business. It aims to contribute to worldwide economic growth and environmental conservation, with one of the world's largest fleets, experience and technology accumulated over its 130-plus years of history, and a challenging spirit aiming to create new value.

Website : <https://www.mol.co.jp/en/index.html>

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<JRCS corporate profile>

We will bring a smile to everyone's face by supplying digital technology to maritime logistics, supporting people's lives. This will create precious time that can be spent with precious people. With this wish at JRCS, it established the Digital Innovation LAB in April 2018.

Since its establishment, JRCS has received feedback not only from people working onboard, but also its partners and other customers involved in ocean logistics as it develops new products with new functions and offer new experiences and new values through its services.

Website : <https://www.jrcs.co.jp/en/>

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