An Open Platform Usable by Anyone

We develop the MaSSA-One platform to share ship-related data and provide beneficial applications, thus fostering an ecosystem that benefits all participating users.



data is utilized in own

Application and

Service Provision

Distribution of crew

support applications

and provision of service support tools



Joint Development

Joint development among users gives rise to new products



Ship-related data During Operation

 $Massa-0 ne \ {\tt Platform}$

Vessel Performance

CBM-type Predictive

Support for Digitalization of





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BEMAC



Massa-One





MaSSA

The Maintenance system for Soundness Sailing Ability.

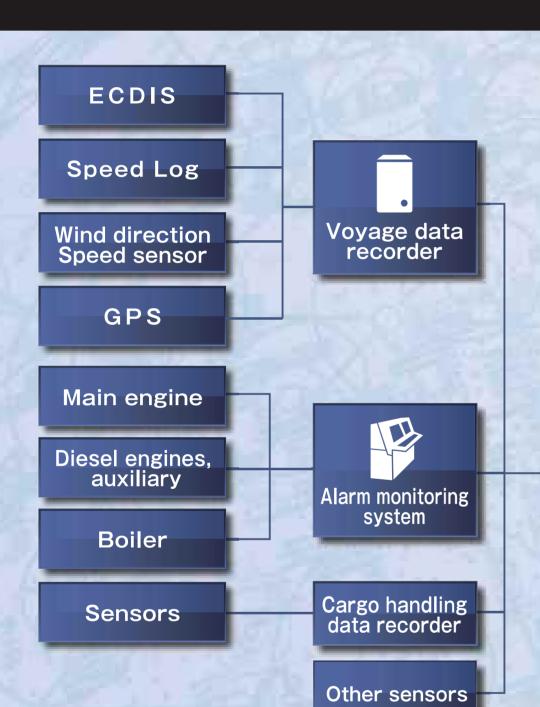
Aiming to realize "a ship that never stops".

MaSSA collects data of ships voyage to enable confirmation of operation status and equipment status.

Furthermore, it utilizes condition-based maintenance (CBM), remote support from onshore offices, automatic ship operation/navigation technologies and more to help prevent equipment breakdowns, maritime accidents and other such problems, ensuring that the ship reaches its intended destination as scheduled.

Shipboard and land platforms that realize MaSSA \[\sqrt{MaSSA-One} \]

MaSSA-One collects and stores a wide array of data on the ship's engines, cargo handling, voyages and more, and shares the data with the onshore offices to provide ship voyage support applications.



Ship-to-Land Communication

Ship-to-Land
Communication

IoT Data Server

AT SEA

Shipboard Crew Support Applications

We create shipboard application environments to support ship's crew performance

Onshore Server

Onshore Monitoring and Information Analysis Applications

Sophisticated data analysis and ship voyage support applications are provided for the onshore office

Application Development and Service Provision

Equipment Monitoring

Troubleshooting Support

Maintenance Support

Ship Voyage Support

Failure sign detection

Shipowner (Ship Management Company)

Operator

Shipbuilding Yard

Marine equipment manufacturer

Real-time visual display of ship-related data and provision of crew support applications.

- Various ship-related data collected via the IoT Data Server can be confirmed in real time from onboard the ship.
- Installation of applications to support the ship's crew.
 MaSSA-One provides the applications that

MassA-One provides the applications that enables appropriate and speedy recovery response on board and supports efficient operation in the event of trouble.

Sophisticated data analysis at the onshore office

- Collected ship-related data is utilized in the development of applications for
- responding to problems and malfunctions, maintenance support, and more.

 Enables more advanced onshore analyses in response to problems in order to determine their causes.
- Facilitates optimized management of shipboard equipment by using condition-based maintenance (CBM) rather than time-based maintenance (TBM).

Flexible responses to a wide range of needs.

- Users can choose from a lineup of continually developed applications, selecting only those they wish to use.
- Applications from other companies as well as service collaborations (via ISO APIs) are also available.
- Massa-One onshore servers are capable of coordinating with other types of onshore servers.