Comprehensive training simulator systems

A full range of certified training solutions

Navigator PRO 6000 Navigation Training

Ice Navigation Module

Fishing Operations Module

Inland Waterways Simulator

COMM PRO 6000

The simulator is designed for the use in training centers to train or qualification upgrade for cadets and radio operators in both routine and emergency operations.

Technological Core 2.0

ERS: Ship Power Plant and Auxiliary Systems Simulator

LCHS: Liquid Cargo Handling and Ballast Operations Simulator

Virtual Reality Navigation Simulator

Full immersion enhances realism and allows you to create training scenarios that are as close to real-navigation conditions as possible.

- Scalable Combinations of Hardware & Software Solutions
- Based on Real Shipboard Equipment
- Development of Professional Competencies for Maritime Industry Specialists
- Extensive Database, Library of Models & Training Exercises

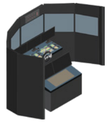
Possible Simulator Configurations & Composition

PC-based Individual simulator

Desktop navigation bridge (Class B)

Small navigation bridge (Class B, C)

Class A navigation bridge according to DNV standard



Full-mission navigation bridge simulator according to DNV standards (Class A, B, C) and customizable to individual specifications

Technical and engineering support

We provide a full range of engineering services covering the entire lifecycle of complex hardware-software systems: from design and manufacturing to delivery, supervision, commissioning, testing and subsequent post-deployment maintenance.

The EMDT engineering team is available to provide highly qualified assistance and support at every stage of the operation of our products. Access 24/7 help, knowledge base with necessary manuals and other technical documentation.

Proven expertise. Trusted partnership.
Service excellence.

EVOLUTION MARINE DIGITAL

MADE IN RUSSIA

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Integrated Maritime Solutions for Voyage Safety, Fleet Optimization, and Crew Excellence

Digital technologies and IT services for the maritime industry

The key to cost-effective maritime logistics lies in digital transformation, sustainable shipping and professional crews. Evolution of Maritime Digital Technologies (EMDT) delivers solutions to all these challenges.

EMDT is a Russian developer of a full range of integrated solutions for the maritime industry, designed for domestic and international

- Seafarers
- Fleet operators
- Shipowners
- Training centers

We address critical information and navigation challenges essential for day-to-day operations in any sailing region in the world

- Safe navigation
- Professional training
- Information support

EMDT Integrated Solutions for Sustainable Development and Technological Leadership

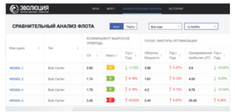
- AI-driven services based on machine learning and big data analyses to enhance shipping efficiency and safety.
- Navigation systems and services.
- Training solutions for crew competency development.

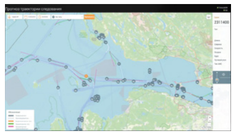
Expertise Verification

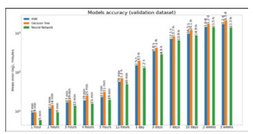
- All EMDT products and services are registered in the Russian Software Registry of the Ministry of Digital Development.
- Approved by Russian Maritime and River Transport Agency.
- Certified in both mandatory and voluntary quality and safety compliance systems.

AI-powered solutions based on machine learning and data analytics technologies

EMDT LLC provides integrated solutions and services that enhance companies' competitiveness by reducing accident risks while improving operational efficiency by 10-20%.







Fleet Operations Efficiency and Safety

Route Planning and Optimization Service, incorporating fuel efficiency factors analyses (SEEMP, CII) is based on data from route monitoring systems, vessel reporting data, weather information and mathematical modeling.

Fuel Efficiency Monitoring Service

The service is designed to track vessel's route performance efficiency, identify and analyze optimization opportunities across multiple parameters, and assess the environmental impact of the fleet, including carbon footprint and CO_2 emission indexes.

Vessel Trajectory Prediction & Safety Anomaly Detection

Provides high-precision vessel trajectory forecasting (30-60 minutes prediction window) and real-time detection of navigation safety anomalies, including unsafe maneuvering patterns and deviations from prognosed navigation parameters.

Route Optimization Service

Designed to minimize fuel consumption and navigation risks during vessel voyage while maintaining scheduled arrival times at terminals. This solution improves fuel efficiency in maritime shipping operations by 3-10%.

Estimated Time of Arrival (ETA) Prediction Service

This AI-powered solution provides accurate vessel arrival forecasts for specific destination ports. Utilizing neural networks trained on historical AIS data and meteorological information, it delivers precise arrival time predictions to optimize port operations and voyage planning.

Navigation systems and services

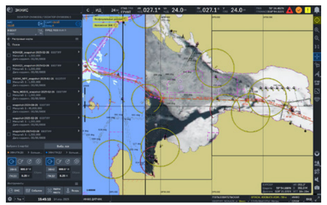
PRO-MARINER 5000 MFD Integrated Navigation System

Unlike conventional navigation equipment, the PRO-MARINER 5000 MFD represents a comprehensive integration of all vessel systems – including motion control – into a unified ship management platform.

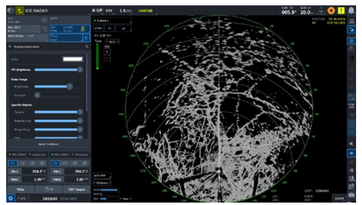
The Pro-Mariner 5000 MFD is built on the proven concept of a multi-functional display (MFD), which consolidates and visualizes data from multiple navigation sensors on a single device. This integrated approach enables ship to navigate more safely and efficiently.

Key Benefits of the PRO-MARINER 5000 MFD Integrated Navigation System

- Satellite Imagery Overlay: detailed visualization of ice fields and navigation channels for ice passage.
- Weather and Ice Condition Forecasting: real-time meteorological data and ice coverage analysis for the Northern Sea Route.
- Ice Radar Functionality: specialized radar image overlay of ice fields directly over navigational charts.
- Supports integration with EMDT intelligent data analysis systems, such as fuel efficiency monitoring.
- Automatic Track Control System maintains the vessel within the safety corridor of the designated route.
- Under-Keel Clearance (UKC) Calculation defines the depth under the keel, taking into account bathymetry, tidal currents, dynamic vessel effects, and other critical safe navigation factors.
- Navigation Monitoring on Portable Devices enables navigation monitoring beyond the captain's bridge and can be taken into lifeboats during emergencies.



Satellite Imagery Overlay on Navigational Charts



Ice Radar Functionality