The Remote Performance Monitoring Solution
SeeMBox - V

Ship Energy & Fuel Efficiency Monitoring
Formed in 2007, Setel Hellas was one of the pioneers in the on-board ICT infrastructure. Today is a global provider of innovative Value Added Solutions (VAS) aimed at optimizing vessel’s operational efficiency.

In the past five years Setel’s installed base in the maritime market have increased from less than 20% to more than 50%. The company and its partners have provided valuable product and services to ship owners and operators by delivering strong collaborative ship to shore and shore to ship infrastructure and connectivity.

We enable a unique set of products to help our customers become leaders in their respective industry and our partners to differentiate themselves not only from their competition but also from Over the Top (OTT) players and level the playing field between them.
Our dedicated industry experts look forward to serve our customers in the shipping industry punctually and efficiently.

With presence at major shipping Hubs from Piraeus to Singapore and Cyprus to Florida, Setel Hellas provides a worldwide high quality support.
The Maritime Solutions Bundle

- Intelligent Vessel™ Suite
- SmartBox-V™
- SeeMBox-V Remote Vessel Monitoring
- Maritime Telemedicine Solution
Today, Ship Energy Management is not only a statutory requirement, even voluntarily at the moment, but also a necessity based on the real Shipping Industry operational requirements and the rising operating costs.
The legislation:

* MEPC 58/INF.7 *(2) GHG-WG 2/4/1.

A coalition of the International Chamber of Shipping (ICS), the Baltic and International Maritime Council (BIMCO), Intercargo, Intertanko and the Oil Companies International Marine Forum (OCIMF) submitted a draft Ship Efficiency Management Plan to in 2008* and further refined this draft for an inter-sessional meeting the following year *(2)

* MEPC.1/Circ.683

Guidelines for development of the Ship Energy Efficiency Management Plan (SEEMP) regulations were agreed at the following session, MEPC 59 in 2009, and circulated* for voluntary application.

* Resolution MEPC.203(62)

The regulations themselves were eventually adopted as an amendment to MARPOL Annex VI at MEPC 62 in July 2011 as Regulation 22.*

Source: SEEMP Manual by Bimco
The rising Operational costs:

Source: Operating costs trends by MooreStephens
The Ship Energy Efficiency Case

The Fuel costs:

Source: www.bunkerworld.com
The repair & maintenance costs:

Source: OptCost Presentation by Mr. Bob Maxwell - VShips
The Ship Energy Efficiency Case

The Vessel costs:

Vessel Cost Modern VLCC ($65m value / av daily hire $20k)

- Interest: 4%
- Installments: 8%
- Opex: 20%
- Bunker: 12%
- Port cost - commision: 54%

Source: OptCost Presentation by Mr. Bob Maxwell - VShips
The Requirements:

- Comply with legislation
- Achieve real fuel savings
- Achieve real maintenance savings
- Improve Charter profile
- Enhance efficient reporting
- Sustain plan and savings
The SeeMBox-V Concept

For a sustainable Efficiency Planning
Seamless Real Time monitoring is mandatory!

Legislative requirements
Business Economy
Competition

Efficiency Planning
Plan
Monitor
Adjust

SetelHellas
Your Global ICT Partner

Helica Maritime Ltd.
On line and real time access to all vessel parameters from the Office through a simple & comprehensive user interface.

Historical data are stored at open database thus enabling the usage of data from any related application (PMS, CBM).

Comprehensive tools for Analytics, enable prevention and prediction of possible malfunctions thus improving the R.O.I.
The SeeMBox-V Logical Architecture

- SeeMBox-V (Server)
  - Ethernet
  - Net Daemon
  - OPC Server
  - NMEA Parser
  - Ethernet

- Signal Processor
  - Ethernet

- DB Server
  - Ethernet

- Ethernet
  - RS
  - Eth

- Additional sensors
- Mass Flow Meters
- Ships Monitoring
  - Control
  - Navigation
  - Systems & Equipments

- SAU

SetelHellas
Your Global ICT Partner

Helica Maritime Ltd.
giving our clients the freedom to focus on their business
The SeeMBox-V Modular Design (example)

**SeeMBox-V Open Platform**

- **Navigation Equipment**
- **Alarm Monitoring System**
- **Fuel Monitoring Sensors**
- **Cargo Control System**
- **Ballast Control**
- **Individual Modules and Tags**

**Reporting Tools / Interactive Mimic Drawings / Configurable GUI**

- **SeeMBox Basic Module (AMS & Navigation)**
- **SeeMBox Fuel Monitoring Module AFMCS**
- **SeeMBox Cargo Ctrl Monitoring Module CCMCS**
- **SeeMBox Ballast Ctrl Monitoring Module BCMCS**

- **Tags**
- **Module**
- **Tags**
- **Module**

**SetelHellas**

**Helica Maritime Ltd.**
The SeeMBox-V Solution – Architectural Overview

The SeeMBox-V
Integration with any onboard system
The SeeMBox-V Concept:

- Converting readings into signals
- Converting signals to Data
- Converting Data to information
- Converting information into Actions

Achieving the **Preemptive Action Protocol**!

And the above in real time and with the lowest volume & bandwidth requirements in the Market!
The SeeMBox-V Solution – Architecture in more details

the SeeMBox-V Project
...from readings to preventive actions

Vessel Alarm Monitoring
Boilers
Mass flow meters
Rudder Control
Engine Telegraph
Speed Log
Gyro

SeeMBox-V
SmartBox-V™ Server
SeeMBox-V Server

Internet
Office
Clients

Onboard Clients
SeeMBox-V Client view

SetelHellas
Helica Maritime Ltd.
The SeeMBox-V Solution – The traffic control dashboard

Stay on-line with less than 50MB traffic per month for around 200 readings acquired & synchronized every 10 seconds!

At left you may notice the main dashboard of the office Administrator for a fleet of vessels.
The SeeMBox-V Solution – Fuel Monitoring
The SeeMBox-V Solution – Real time consumption, Emissions & EEOI
The SeeMBox-V Solution – Main Panel User customizable

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**Devices**

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**Traffic Control**

![Traffic Control](image)
The SeeMBox-V Solution – Interactive Mimic drawing sample
The SeeMBox-V Solution – Consumption reporting sample

ME Consumption report from bulk carrier using new Mass flowmeters through the SeeMBox-V interface
-Seamless, on time and accurate information from vessel eliminating any possible human error

-Historical data and real time update enhance being preventive

-Real time information & reporting enables swift reaction to condition changes and enhances adaptability of planning

-SEEMP based on real and accurate data rather than mathematical models

-Fast and proven R.O.I.
**The SeeMBox-V Solution – Achievements since February 2013**

- Already signed with several Hellenic Shipping Companies for 49 vessels
- Four vessels already deployed
- First vessel online since mid-October 2012
- First overseas customers scheduling surveys
- New features coming up within Q2 2013
A selection of Shipping Companies trusting Setel Hellas