MARINELEC
TECHNOLOGIES

Safety and Smartship solutions

Presentation of M-TASK live streaming and ecomer features

TRANSFER OF DATA FROM M-TASK TO THE SHORE

M-TASK can transfer to the shore 2 types of data :

A. Live streaming of the M-TASK workstation to the on-shore computer

B. Transmission of recorded data from M-TASK's to the on-shore computer via Marinelec Cloud Service – *MCS* – and ecomer software.

ecomer software consists of 2 parts :

- ecomer_emb : software installed on Marinelec's M-TASK monitoring system to record and send the data to *MCS*
- ecomer_tc : PC software installed on shipowner's on-shore computer to download the data from MCS, to analyse the data and to make reports

A. Live streaming option :

- M-TASK allows an on-shore computer to remotely display and control the workstation
- The on-shore computer displays exactly the same pages, control function and configuration features as the workstation on the ship
- Ship to shore transmission is done via Marinelec's 3G/4G modem or via ship's internet

Used for :

- Remote support
- Remote monitoring
- Remote control for unmanned ships

B. ecomer option :

- M-TASK transmits all the parameters from the ship to the Marinelec Cloud Service - *MCS*

- The software ecomer_tc installed on the on-shore computer downloads the data from the *MCS* and offers numerous analysis tools :
    1. GPS tracking
    2. Plot of raw parameters over time
    3. Plot of aggregated data over time
    4. Compare data of different time periods
    5. Draw X versus Y plots
    6. Set up indicator page to read at a glance the key data sent by the ship
    7. Export data as Excel file and print reports

Used for :
- Fuel consumption and CO2 emission analysis and reporting
- Vessel performance analysis
- Machineries operations monitoring (engines, generators, motion compensated gangways, CTV active fender systems, etc…)
- Predictive maintenance

MARINELEC
TECHNOLOGIES

1. GPS tracking :

- Select a period of time to show the ship's GPS tracking
- Select a parameter and a threshold value to see the evolution of the parameter on the GPS tracking

On this example, the selected parameter is the vessel speed over ground and the threshold is set to 10knots (the plot is black when the speed is below 10 knots and in red when the speed is above 10 knots)
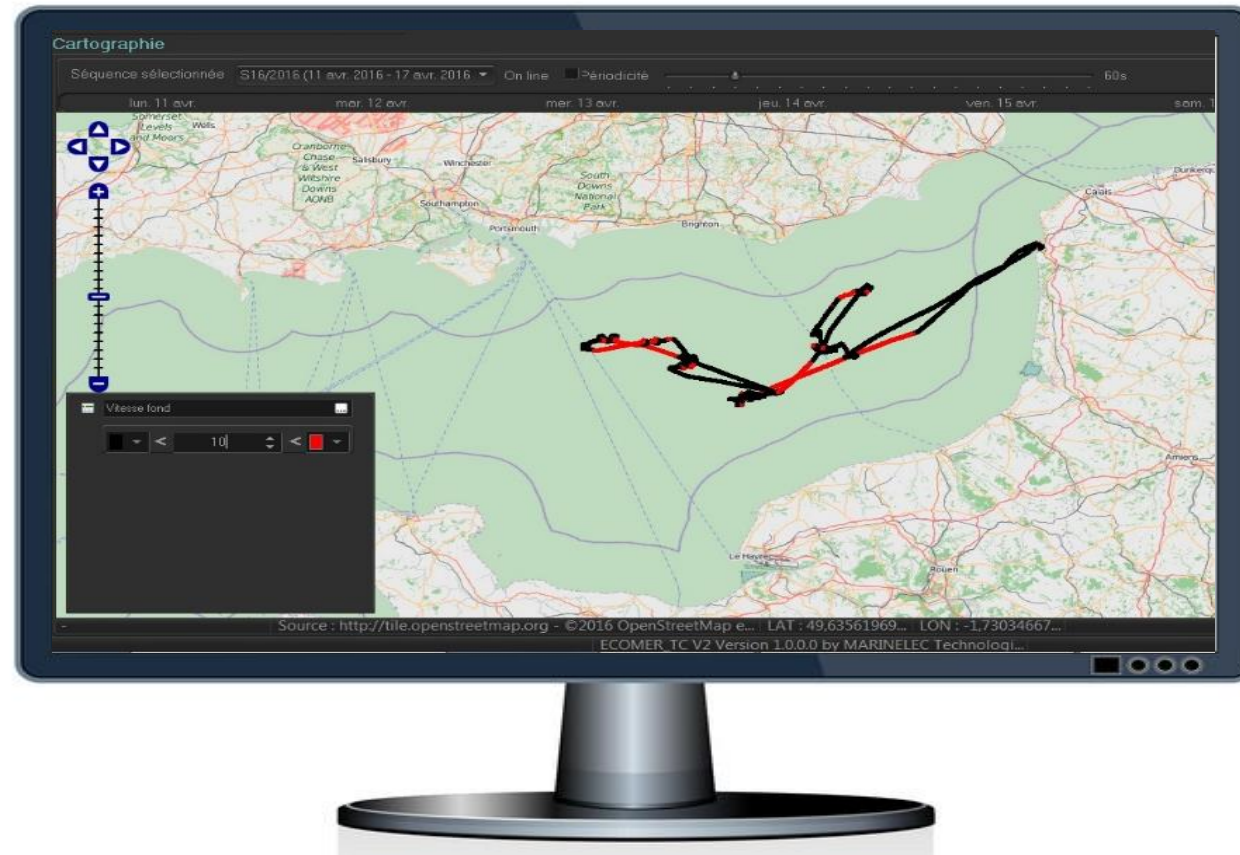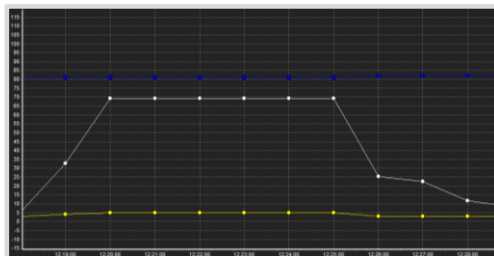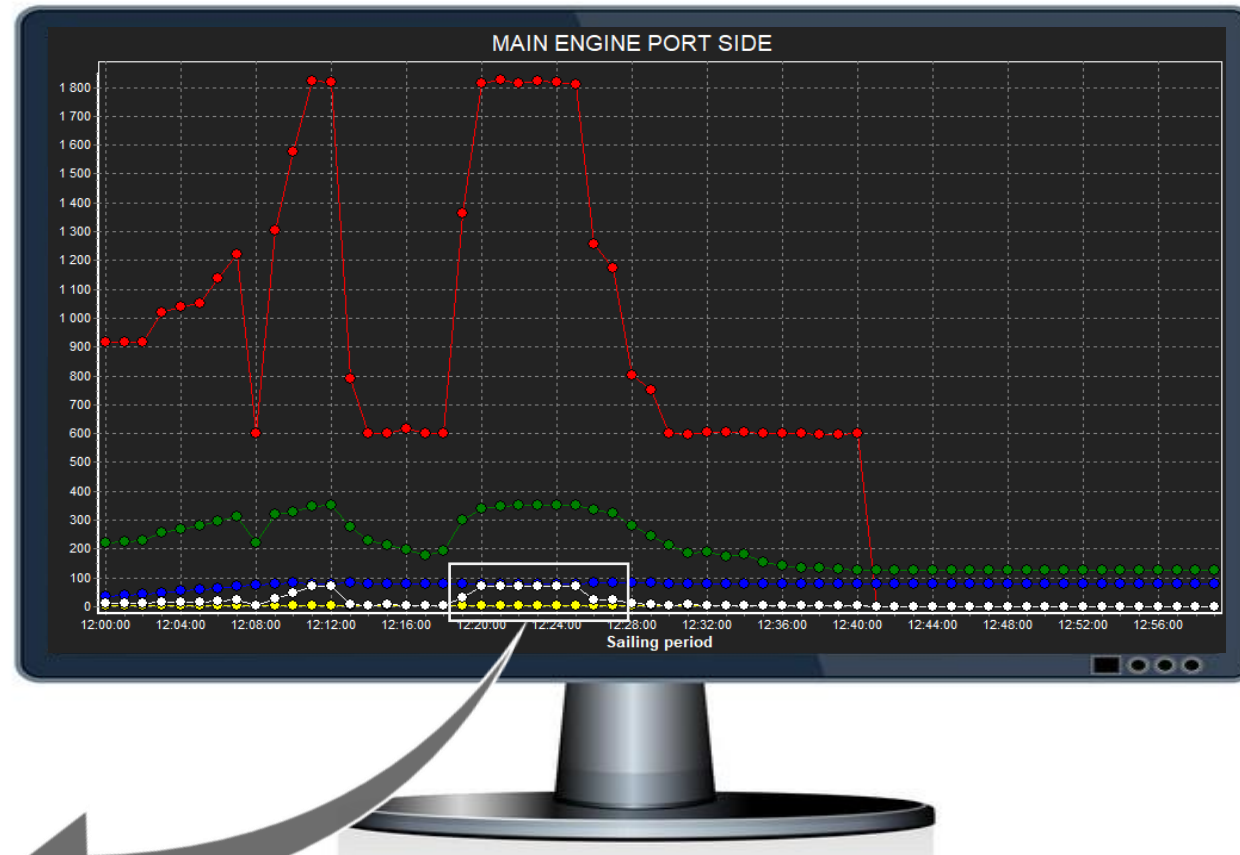
2. Plotting of raw data over time:
- Select a set of parameters to plot over time
- Zoom in to see every sample's exact value

On this example, the selected parameters are :
- *Red : Engine RPM*
- *Green : Exhaust gas temperature*
- *Blue : Cooling temperature*
- *White : Fuel oil consumption*
- *Yellow : oil pressure*

MAIN ENGINE PORT SIDE

Sailing period

3. Plotting of daily aggregated data over time:
- Select an aggregation method :
  - Sum : the aggregated data is the sum of the data over 1 day
  - Average : the aggregated data is the average value over 1 day
  - Maximum/minimum : the aggregated data is the maximum/minimum value of a data over 1 day
  - Count : the aggregated data is the quantity of data recorded over 1 day

On this example, the "sum" aggregation method is used to show the daily fuel oil consumption of 3 generators
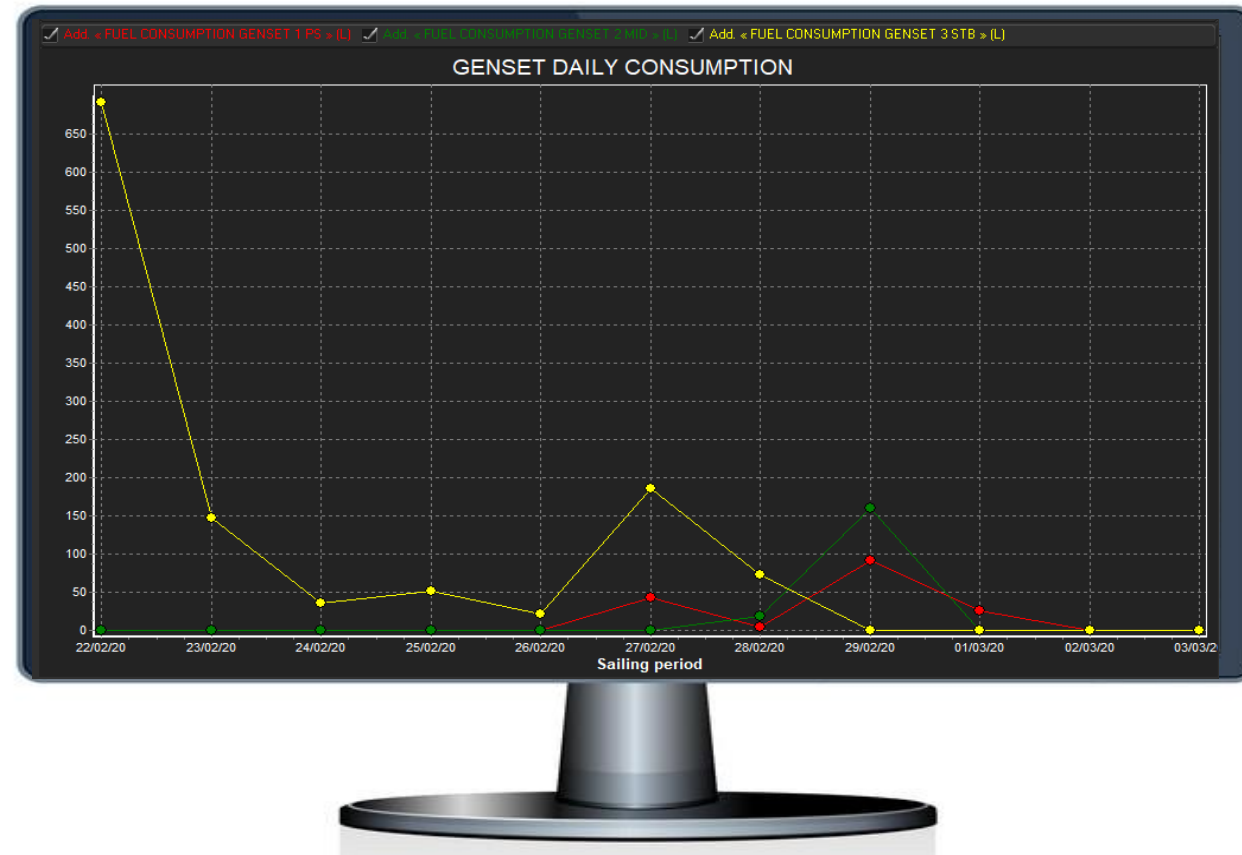
4. Compare data of different time periods:
- Select a set of data to be compared between time periods
- Select time periods to compare

On this example, the usage of the ship is compared between 3 time periods.
The usage of the ship is broken down into :
- Yellow : % of economical transit time
- Blue : % of fast transit time
- Green : % of carrying cargo / passengers time
- Red : % of standing-by time
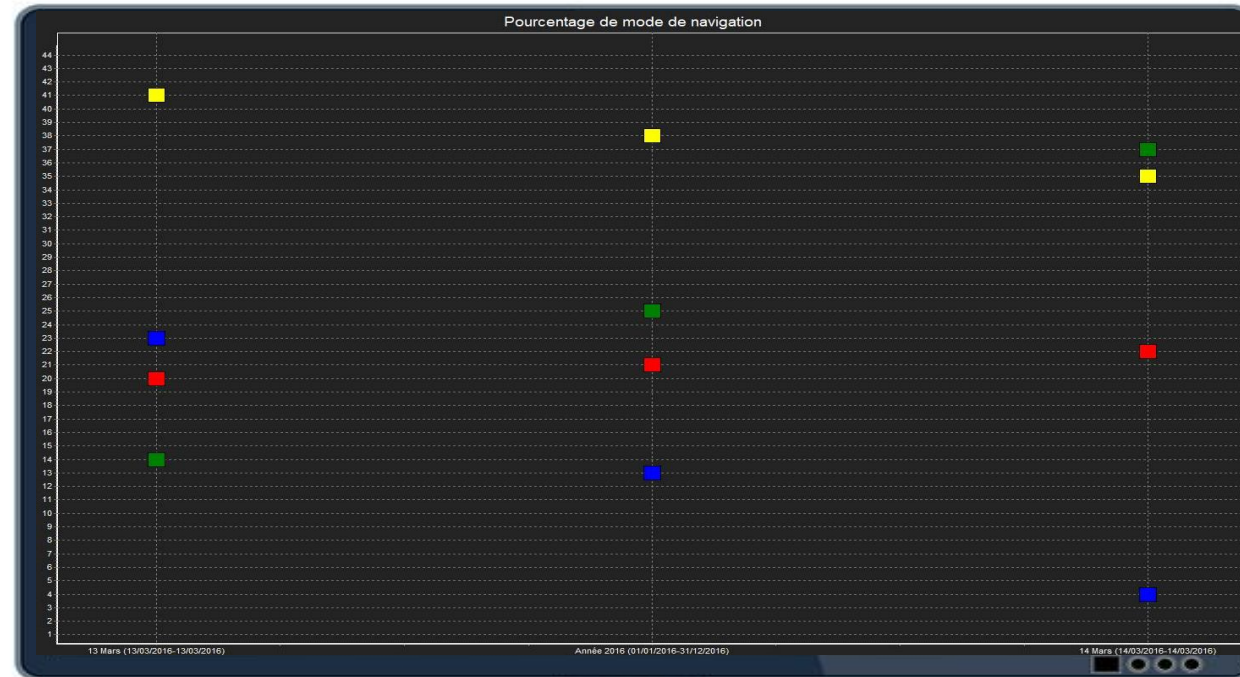
5. Plotting of X versus Y data :

- Select a data to plot as X and a data to plot as Y
- Select time periods to compare plots

On this example, the speed over ground (X) is plotted with the fuel oil consumption (Y) for different time periods to anaylse the vessel performance

MARINELEC TECHNOLOGIES
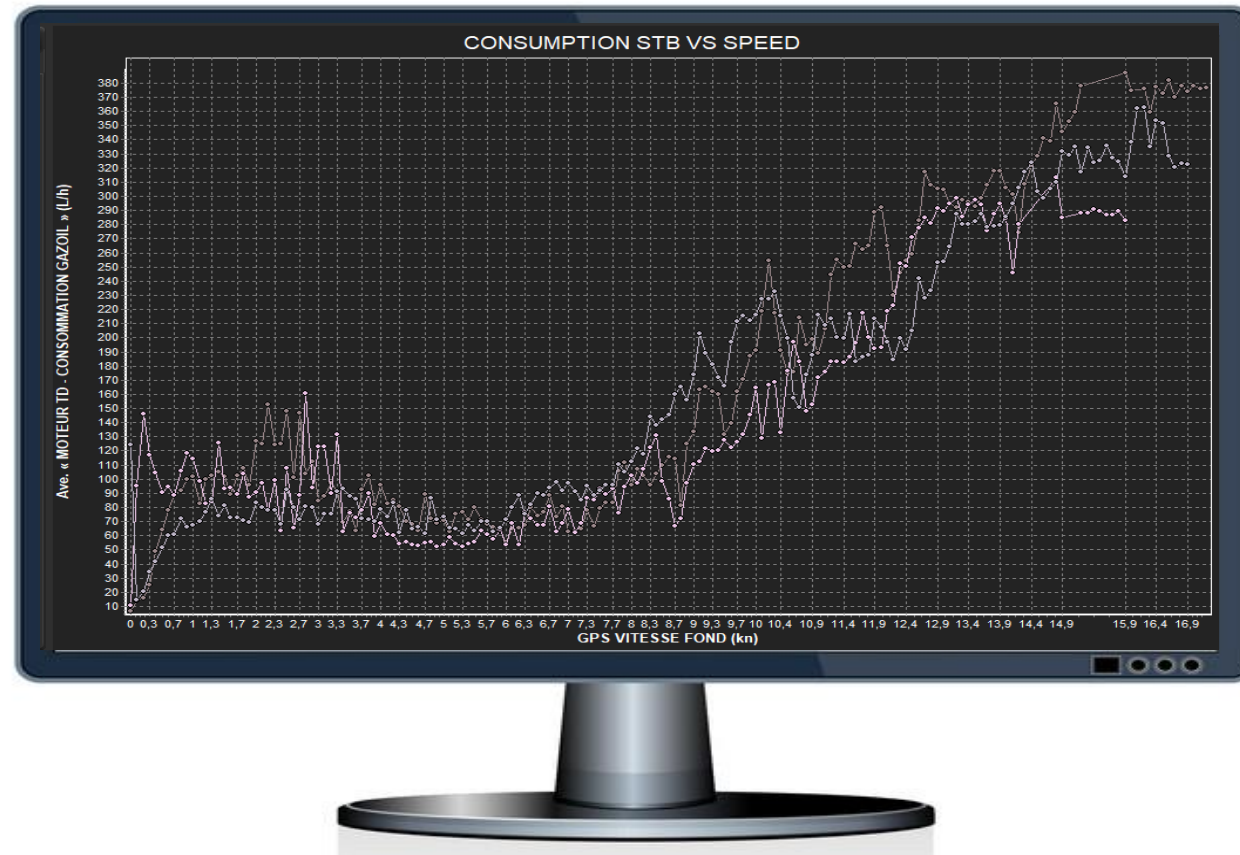
6. Create a customized dashboard to see the ship's parameters at a glance :

- Select the indicator type among :
    - A chart to see the last known position of the ship
    - An indicator to show the average value of a parameter over a time period
    - A plot of the parameter over the time for a specific time period
    - An indicator to show the last known value of a parameter

MARINELEC
TECHNOLOGIES

MARINELEC
CLOUD SERVICE

7. Export data to Excel files for further analysis and Print reports

Watch the demo video here : https://youtu.be/9_y6Bd-fY9M

ECOMER TC overview demo

MARINELEC TECHNOLOGIES

MTASK : SMART ALARM CONTROL & MONITORING SYSTEM

ECOMER Analysis software

Wheelhouse

15'' HMI Touchscreen

3G

Marinelec's cloud Service - MCS

NAVIGATION LIGHT CONTROL PANEL

Main SWB Room

PLC FRAME

Cabins

Inputs & Outputs

Remote alarm panel

ADDRESSABLE FIRE ALARM PANEL

Hull & Doors

AMS SENSORS :
- Bilge detectors
- Watertight door detectors
- Tank level switch
- Tank pressure gauge

Engine Room

LIGHT COLUMN

Propeller Room

LIGHT COLUMN

BNWAS

ENGINE TELEGRAPH
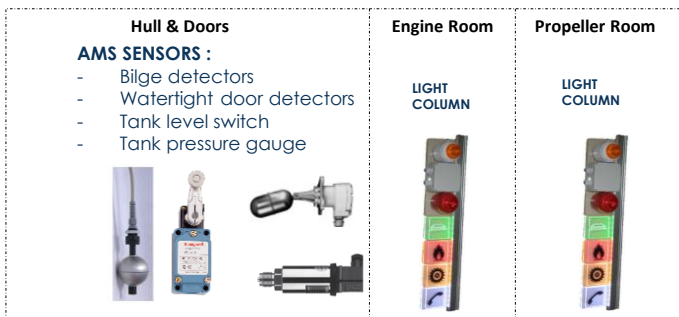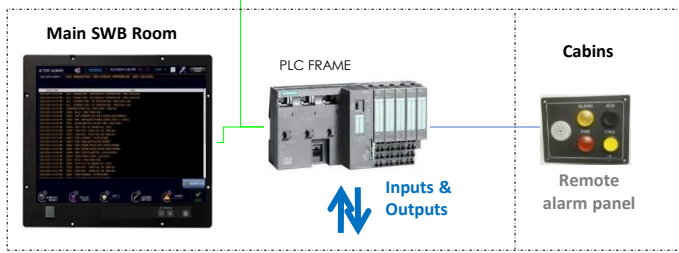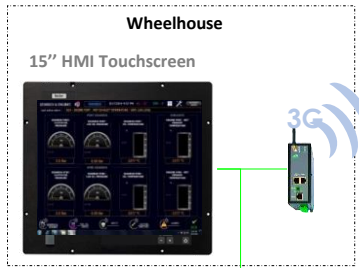
6 * Harbour Tug for BOLUDA

Shipyard : Piriou Vietnam
Year : 2019, 2020
Class : BV AUT UMS
Flag : France

MTASK : SMART ALARM CONTROL & MONITORING SYSTEM

Wheelhouse

15'' HMI Touchscreen

3G

Marinelec's cloud Service - MCS

ECOMER Analysis software

Main SWB Room

PLC FRAME

↑↓ **digital & analogue I/O**

FIRE ALARM PANEL 8 ZONES

GENERAL ALARM PANEL

NAVIGATION LIGHTS CONTROL PANEL
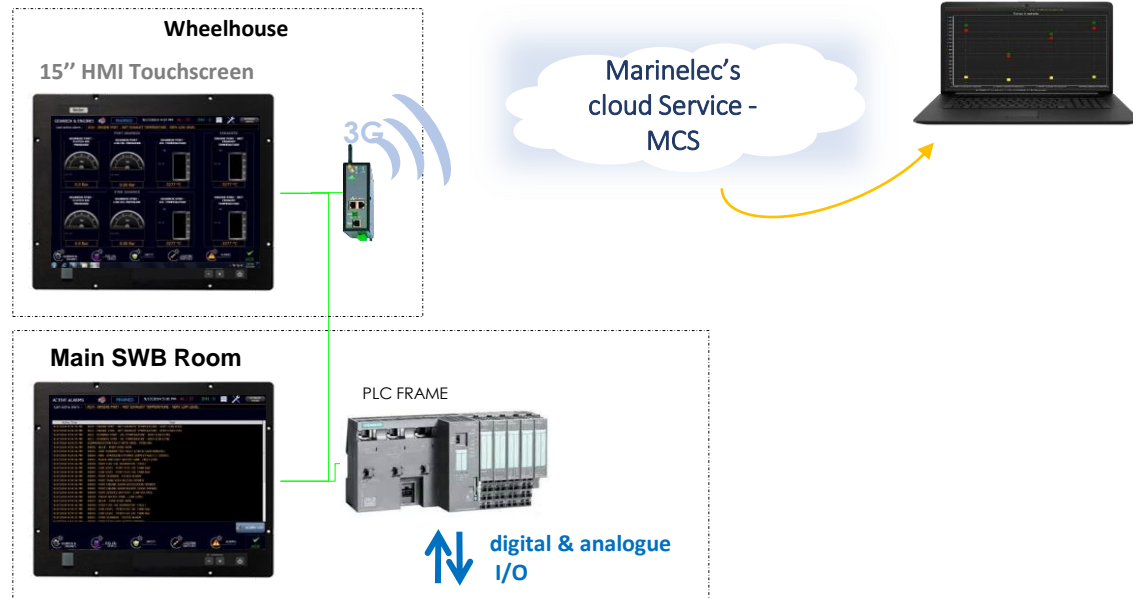
3 * Harbour Tugs for PELINDO 1

Launch: 2019 & 2020

Class : LR

Shipyard : PT CITRA

MTASK 15'' WORKSTATION

MTASK INPUT / OUTPUT MODULES
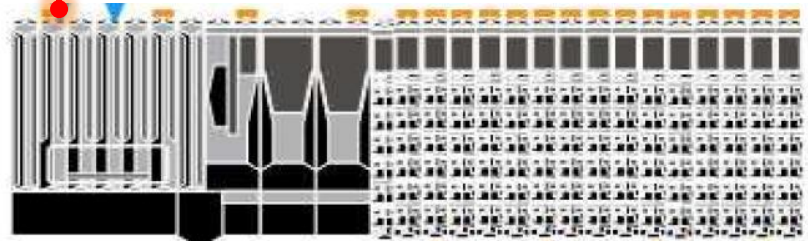
MTASK : SMART ALARM CONTROL & MONITORING SYSTEM

- Electric motors interface via CAN-BUS
- Battery Management System interface via CAN-BUS, monitoring of all battery cells :
  - Voltage
  - resistance
- Diesel Engine interface via NMEA2000
- Generator interface via CAN-BUS J1939
- GPS Interface via NMEA
- Remote control of pumps, valves and lights
- Transmission of all parameters to MCS – Marinelec Cloud Service – via 4G

20m 150Pax Hybride ferry

Shipyard : ODC MARINE
Year : 2019
Flag : France

MARINELEC
TECHNOLOGIES
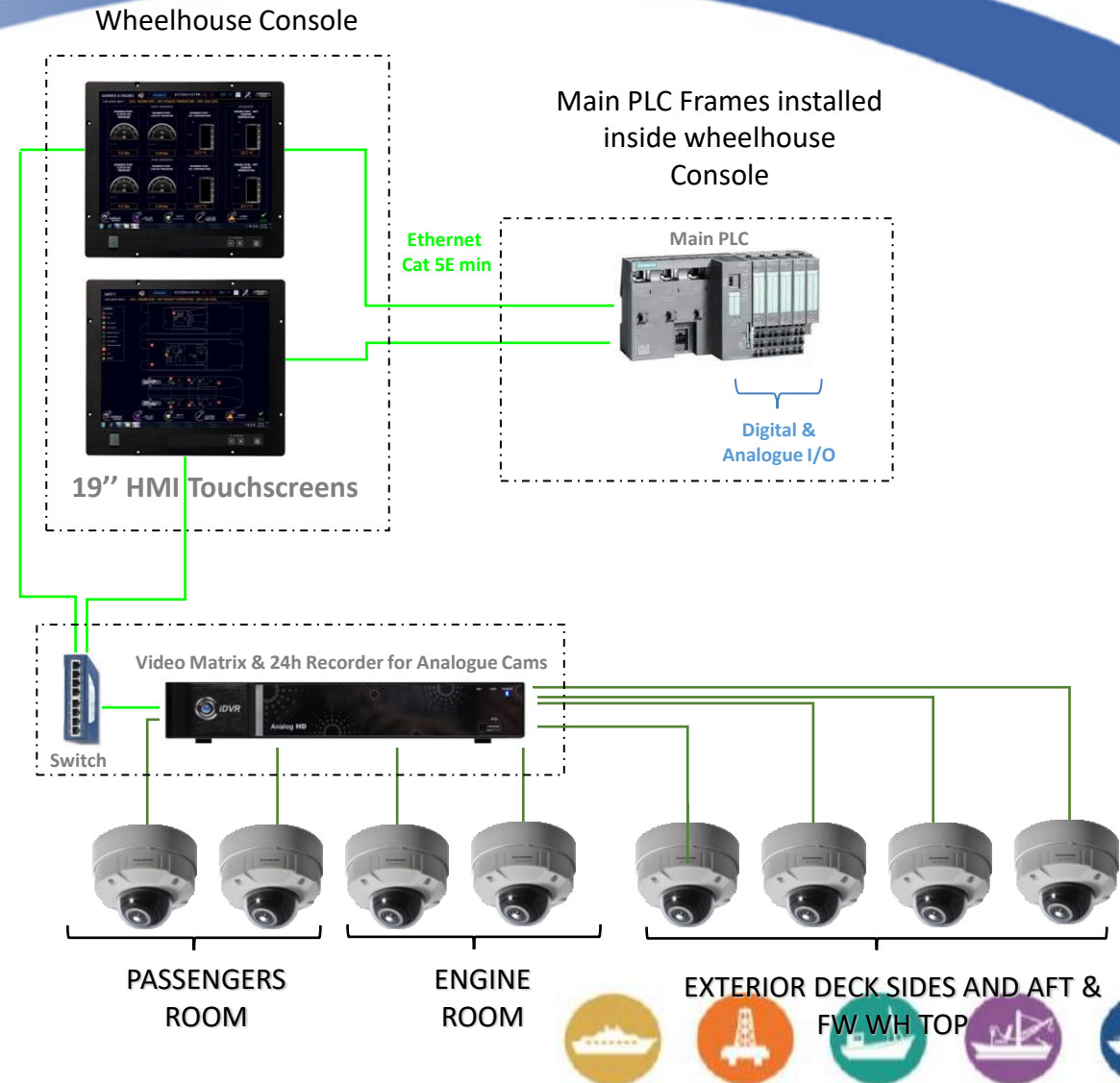
Windfarm Crew Transfer Vessel (CTV)

Shipyard : PIRIOU VIETNAM

MTASK : SMART ALARM CONTROL & MONITORING SYSTEM

- 68 Digital Inputs
- 6 Analogue Inputs for tank gauges
- CCTV combined with M-TASK

Wheelhouse Console

Main PLC Frames installed inside wheelhouse Console

Main PLC

Ethernet Cat 5E min

Digital & Analogue I/O

19'' HMI Touchscreens

Video Matrix & 24h Recorder for Analogue Cams

Switch

iDVR   Analog HD

PASSENGERS ROOM

ENGINE ROOM

EXTERIOR DECK SIDES AND AFT & FW WH TOP

MARINELEC
TECHNOLOGIES

Head Quarter :
13 rue Alfred Le Bars - 29000 Quimper – France
+33 2 9852 16 44

www.marinelec.com