

Vessel Monitoring Plan

YUH CHANG NO.2

IMO 8664254

漁船監控計畫



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I.Version History 版本歷史記錄

Version Number 版本號碼		Date 日期	Completed By 完成人員	Description of Changes 變更說明
1.0		2023-10-18	Emmanuel Delalande / Jacky Chen	Installation

II.Program Goals 計畫目標

The objective of this EM program is to increase the coverage and accuracy of catch and fishing activity data. Data generated from the program will be used to identify opportunities to improve on-the-water practices to help the fishery meet objectives of the Fishery Improvement Project, certification (MSC) or any other specific objectives linked to the use of EM. This data will enable fishing companies and branded tuna companies to make trusted and verified claims about the environmental attributes of the raw material they catch or source in their supply chain.

本次電子觀察員計畫目標是提升漁獲及捕撈活動數據的涵蓋範圍和準確度。該計畫產生的數據資料將用辨識出機會來改善漁業捕撈方式，以幫助漁業公司實現漁業改進計畫，認證（海洋管理委員會 MSC）或任何其他特定目標關聯到電子觀察員的使用。這些數據資料能讓漁業公司和有品牌的鮪魚水產公司在他們的供應鏈中的捕獲或採購的漁貨原料的環境屬性做出可信任和經過驗證的聲明。

III. Vessel Information 船隻基本資訊

Installation date 安裝日期	Oct 18, 2023
Vessel WIN 漁船國際呼號 WIN	YJSJ8
Vessel IRCS 漁船國際呼號 IRCS	YJSJ8
Vessel IMO Number 船舶 IMO 識別碼	8664254
Vessel Name 船名	YUH CHANG NO.2
Gear Type (LL - Longline, PS - Purse Seine, PL - Pole and Line) 漁具種類(LL-延繩釣, PS-圍網, PL-一支釣)	LongLiner
Country of Vessel Registration 船舶登記國家	Vanuatu
Vessel Port of Registration 船舶登記港	Port Vila
Vessel Registration Number 船舶統一編號	1909
Registered Vessel Owner 註冊船東	Yuh Yow Marrine (Vanuatu) Co., Ltd.
Primary Vessel Operator 主要船舶經營者	YUH YOW FISHERY CO., LTD.
Secondary Vessel Operator (If Applicable) 二級船舶經營人 (如果適用)	N/A
Vessel Phone Number(s) 船舶電話號碼	+870773400496
Vessel Email 船舶電子郵件	yuhchang2@yuhchang2.oceanbox2.com
Shoreside Contact Name (e.g., Base Manager) 陸上聯繫人姓名 (例如, 基地經理)	蔡坤裕 Kneey Tsai
Shoreside Contact Phone Number 陸上聯繫人電話	+886 07 8220899
Shoreside Contact Email Address 陸上聯繫人電子郵件	tsai.yuhyow@gmail.com
Name of the Captain 船長姓名	
Onboard Language Spoken 船上使用語言	Chinese

IV.EM Provider Information 電子觀察員供應商資訊

24-hour EM Service Contact Information 24 小時 電子觀察員服務聯絡資訊	helpdesk@ocean-sat.com.tw
Regular EM Service Provider Technical Support 基本電子觀察員服務供應商技術支援	helpdesk@ocean-sat.com.tw (CN) (中文) helpdesk@thalos.fr (EN/FR/SP) (英文/法文/西班牙文)
EM Service Provider Project Coordinator 電子觀察員服務供應商專案經理	Océane Aballain THALOS Project Coordinator - Sales Department THALOS 專案協調員-業務部 oaballain@thalos.fr Elsa Gautheret Bureau Veritas Project Coordinator elsa.gautheret@bureauveritas.com
EM Service Provider Technical Support Staff 電子觀察員服務供應商技術支援人員	Emmanuel Delalande Operation Department Manager 運營部經理 helpdesk@thalos.fr edelalande@thalos.fr
EM Service Provider Project Manager	Benjamin Querné Business Manager bquerne@thalos.fr +33 6 71 56 25 40

V.EM Program Contacts 電子觀察員計畫聯絡人

Position 職稱	Name 姓名	Email 電子郵件	Phone 電話	Location (Time zone) 地點(時區)
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EM Program Coordinator 電子觀察員計畫 協調員	Tom Evans	t.evans@key-traceability.com	+447584659898	London(UTC+0) 巴黎(UTC+0)
EM Service Provider Technical Support Staff	Delalande Emmanuel	edelalande@thalos.fr	+33297881800	Paris(UTC+1) 巴黎(UTC+1)

VI. Vessel Owner/Operator Responsibilities 船東/船隻經營者的職責

1. General Requirements 通用要求

- Operate the EM system at all times at port, as well as while on a fishing trip - from the time of departure from port to the time of arrival at the port of unloading.
在港口以及釣魚過程中始終操作 EM 系統 – 從離開港口的時間到到達卸貨港的時間
- Carry a copy of this vessel monitoring plan on board at all times and make it available to any program participants when requested.
隨時備有本漁船監控計畫存放在船上並且可以提供給任何計畫參與者當被要求時。
- Comply with all of the requirements set forth in this vessel monitoring plan.
遵守本漁船監控計畫中規定的所有要求。
- Ensure that no person tampers with, disconnects, or damages any part of the EM system or its associated data.
確保沒有人篡改、切斷連線或損壞電子觀察員系統的任何部分或其相關數據。
- Follow the regular service and maintenance plan as described in this VMP
遵守本漁船監控計畫中描述的定期服務和維護計畫

2. Before a Fishing Trip 在漁船作業之前

- Ensure the EM System has a clean data storage device to log data and video.
確保電子觀察員系統有一個空白的資料存儲設備來記錄數據資料和影片。
- Conduct a system check of the electronic monitoring system prior to departing on a fishing trip and ensure the system is operational.
在漁船出港作業之前，對電子觀察員系統進行系統檢查，以確保系統正常運作。
- In the event of an EM system-check failure, immediately report the failure to the EM service provider and attempt to troubleshoot the failure prior to departure.
如果電子觀察員系統檢查出現故障，請立即將故障報告給電子觀察員系統服務供應商，並在出港前嘗試排除故障。

- In the event that an EM system-check failure cannot be resolved promptly, contact the EM Program coordinator immediately.

如果無法及時解決電子觀察員系統檢查出現的故障，請立即聯繫電子觀察員計劃協調員。

3. During a Fishing Trip 在漁船作業期間

Ensure all camera views are unobstructed, including ensuring there is sufficient lighting to view all catch events at all times, and ensuring that camera lenses are regularly wiped clean. 確保所有攝影機的視野暢通無阻，包括確保有足夠的照明能隨時查看所有漁獲作業，並確保定期擦拭攝影機鏡頭。

Follow all catch handling requirements described in this VMP 遵守本漁船監控計劃中描述的所有漁獲處理要求

Conduct an EM system health check once a day and before every fishing set (check system status and camera view in the OceanLive Recorder Dashboard) 每天進行一次電子觀察員系統檢查，每次漁撈作業前檢查（在 OceanLive 記錄器儀表板上檢查系統狀態和攝影機視野）

In the event of an EM system failure while at sea, contact the EM Service Provider's technical support immediately. 如果電子觀察員系統在海上出現故障，請立即聯繫電子觀察員服務供應商的技術支援。

Make a good faith effort to repair a malfunctioning EM System while at sea using the troubleshooting guide included in this VMP or with the guidance of the EM Provider's technical support staff

使用本漁船監控計劃中內含的故障排除指南或在電子觀察員供應商技術支援人員的指導下，真誠地努力在海上修復發生故障的電子觀察員系統。

4. Upon Completion of a Fishing Trip 在漁船作業航次完成之後

- Notify the EM Service Provider of your anticipated port call at least 7 days in advance by email: helpdesk@thalos.fr, oaballain@thalos.fr, bquerne@thalos.fr. 至少提前 7 天透過電子郵件通知電子觀察服務提供者您的預計停靠港：helpdesk@thalos.fr 和 bquerne@thalos.fr。
- Deliver EM records from the fishing trip to the EM Service provider within 24 hours of returning to port by the fishing company. There are 2 ways to deliver the EM records:

- 1) The SSD retrieval will be done by air freight (DHL, UPS...) and sent to THALOS premises
- 2) Using the OceanLive Uploader (see document procedure).

在返回港口後的 24 小時之內將此次漁船作業的電子觀察員記錄交付給電子觀察員服務供應商。

電子監控記錄傳遞方式有兩種：

- 1) 硬碟檢索將透過空運 (DHL, UPS...) 完成並發送至 THALOS 場所
 - 2) 使用 OceanLive Uploader (請參閱文件流程)。
- Provide the EM Service Provider access to the E-logbook for the completed fishing trip (if applicable)
提供電子觀察員服務供應商登入到已完成漁船作業電子航海日誌 (如果適用)

VII. Catch Handling Requirements 漁獲處理要求

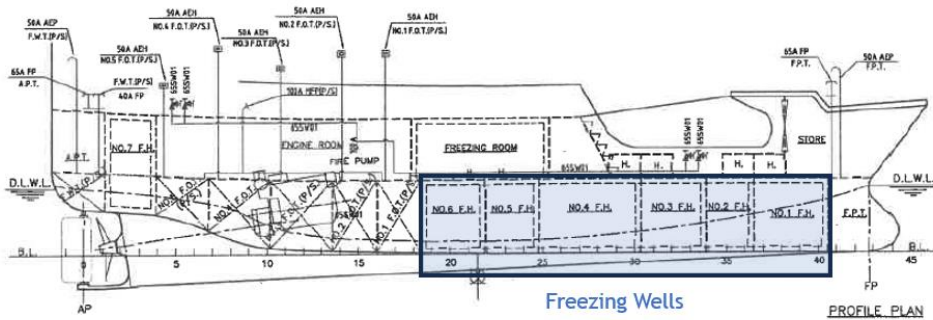
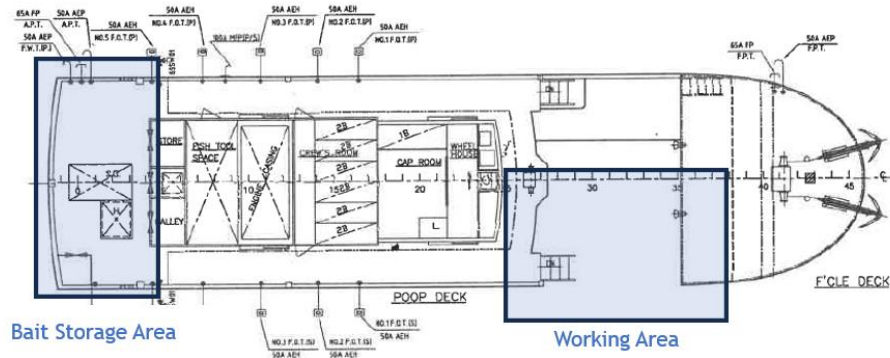
Describe all catch handling requirements to ensure successful video capture.
描述所有漁貨處理要求，以確保影片拍攝成功。

Please refer to the ETF Management Strategy (any required documentation can be provided by KeyTraceability).

請參閱 ETF 管理策略 (KeyTraceability 可以提供任何所需文件)。

VIII. Vessel Presentation 漁船介紹

Insert a diagram of the vessel highlighting key equipment and working areas
插入漁船的架構圖強調關鍵設備和工作區域



IX. Vessel Operations 漁船操作

Description of the vessel's typical fishing operations
 描述該漁船的典型捕撈作業模式

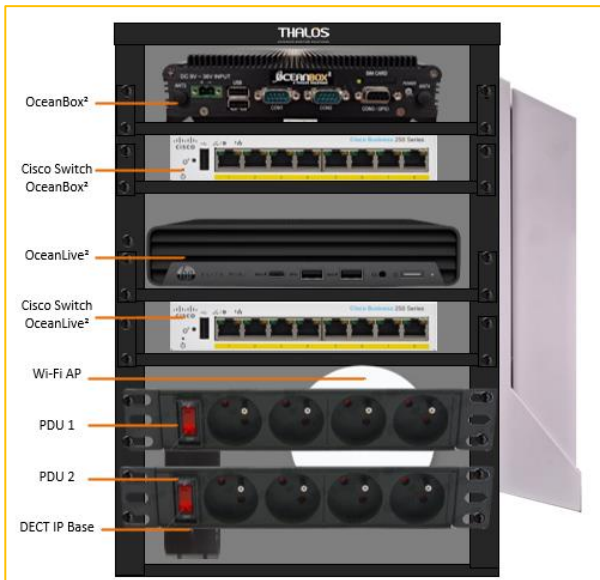
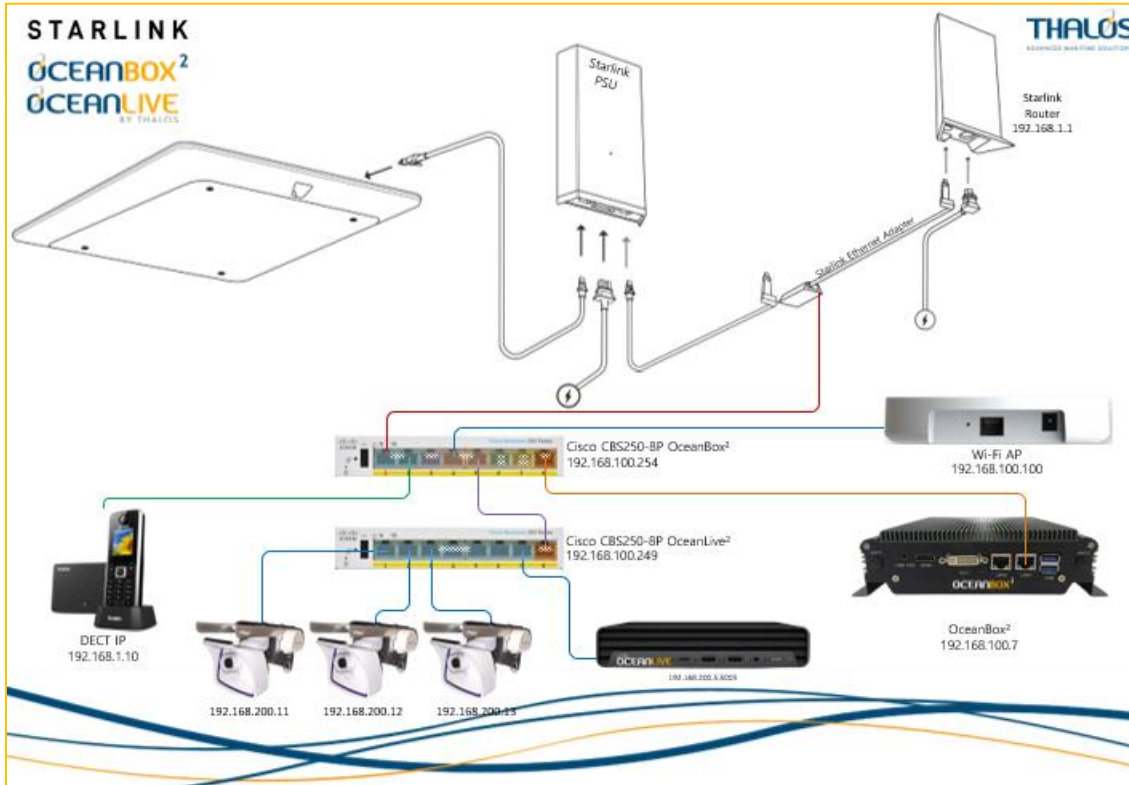
The fishing operation on involves several key steps:

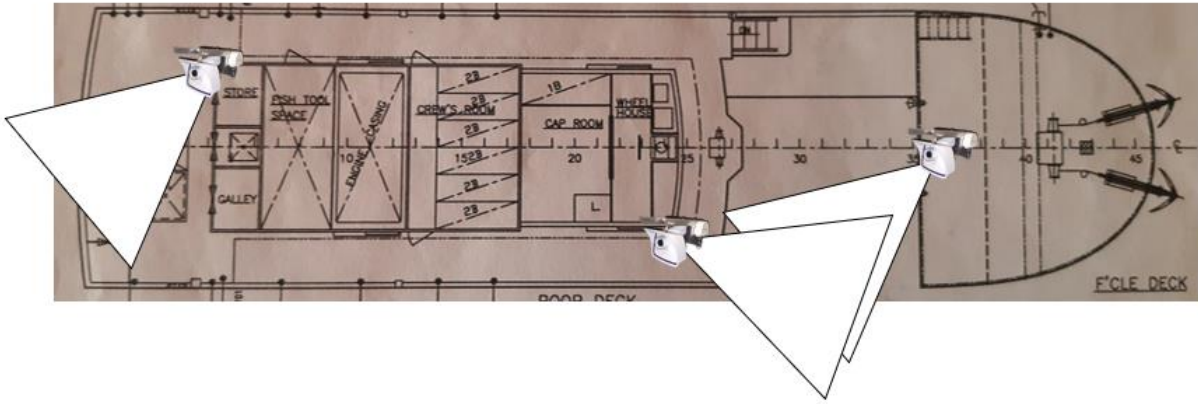
1. **Setting the Longline:** The main line, several kilometers long, is set in the water. It has numerous branch lines with baited hooks attached at intervals.
2. **Baiting and Hook Setting:** Bait, often consisting of smaller fish, is attached to hooks. These hooks are designed to target tuna specifically.
3. **Waiting Period:** After the longline is set, there's a waiting period to allow tuna to take the bait.
4. **Hauling:** The line is then hauled back onto the boat, using a mechanical winch. Fishermen remove the caught tuna and rebait the hooks for the next set.
5. **Storage:** Captured tuna are stored in the ship's hold in frozen conditions to preserve freshness.

The fishing operations occurs in the front starboard of the vessel.

X.EM System Installation 電子觀察員系統安裝

System Diagram 系統架構圖





Insert a diagram of the vessel, identifying the location of the components of the EM system (e.g., cameras, sensors, control box).

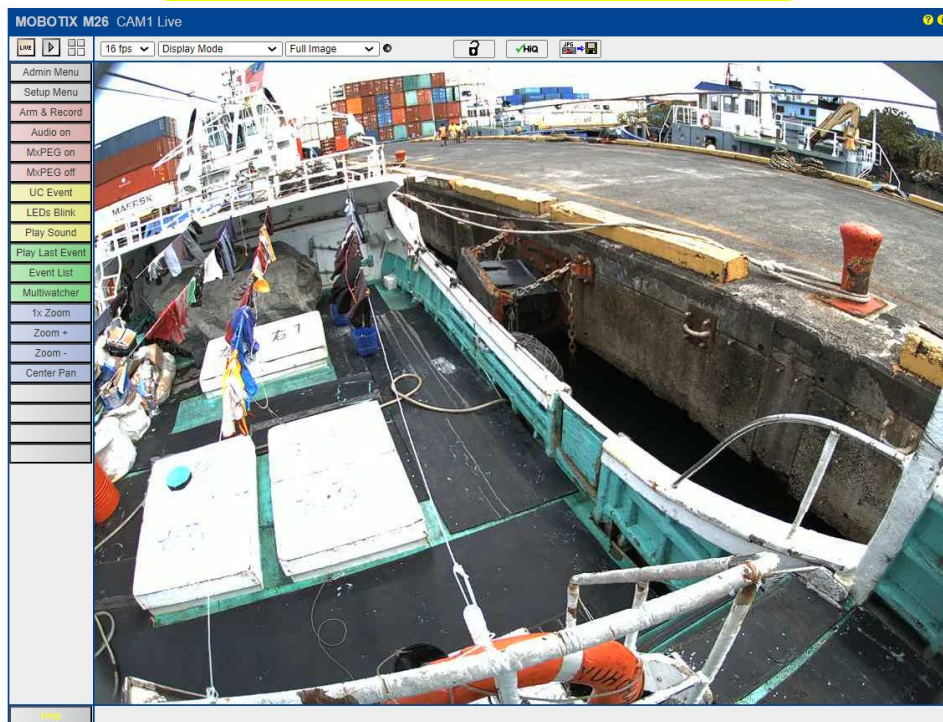
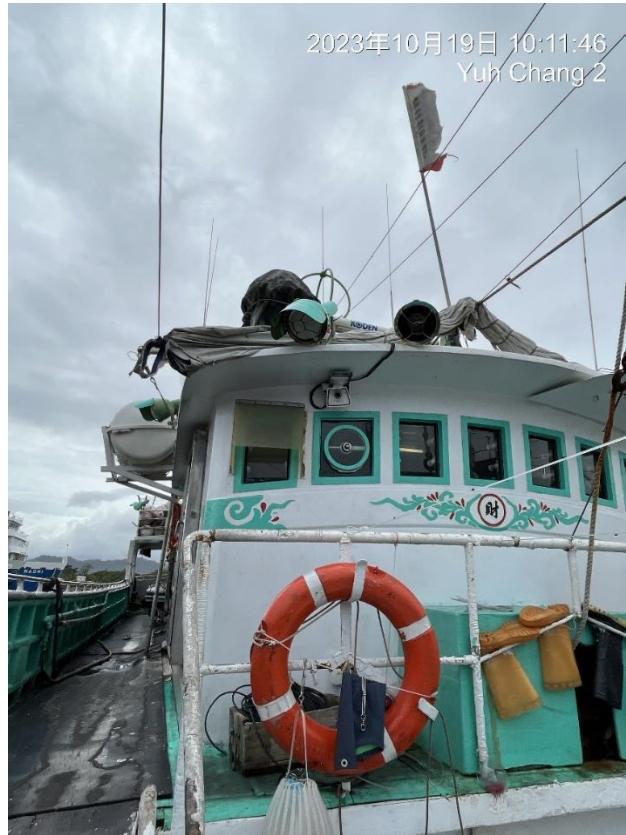
插入漁船的架構圖，識別電子觀察員系統組件（例如，攝影機、傳感器、控制箱）的位置。

1. System Summary 系統概要

	Cameras 攝影機	GPS modules GPS 模組	OceanLive Recorder server OceanLive 紀錄器伺服器	OceanLive PoE switch OceanLive PoE 交換機	System Component 5 系統組件 5
Location 位置	Front deck, Back deck, roof 前甲板, 下甲板, 屋頂	Front deck, roof 前作業甲板, 上甲板	OceanLive rack 機櫃	OceanLive rack 機櫃	discard 丟棄
Purpose 目的	Videos 影片	GPS signal GPS 訊號	Encoding, recording, system management	Camera networking and powering	Discard 丟棄
Type/Model 型式 / 型號	Mobotix M26	Mobotix GPS module	Dell Optiplex 7070	Cisco CBS-08HP	Mobotix M26
Model Number 型號	M26b		Chipset intel core i7	Cisco CBS-08HP	M26b

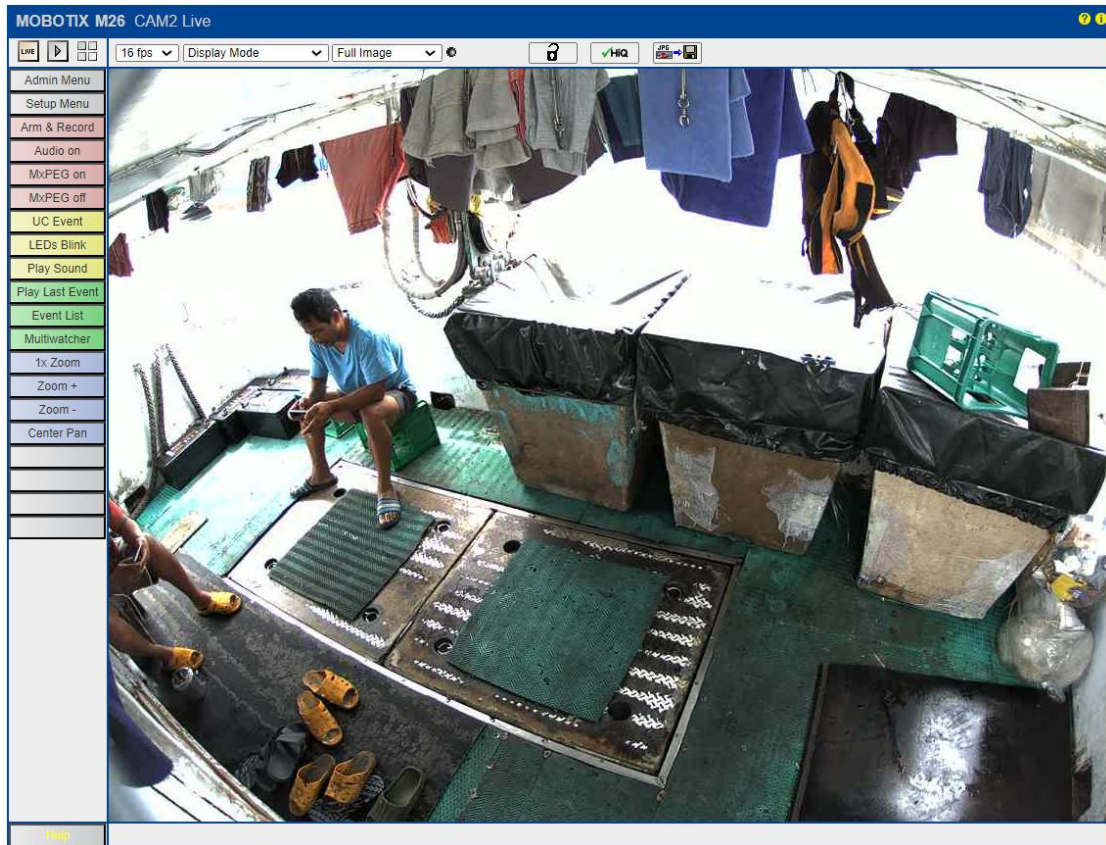
Data Collection Frequency (If applicable) 數據資料收集頻率 (如適用)		1/s			Fishing operation 漁船作業期間
Units (If Applicable) 單位數量 (如果適用)	3	2	1	1	
Threshold Values (If Applicable) 閾值 (如果適用)					Detection from speed and trajectory 從速度和軌跡檢測
Comments 註釋		Signal sent to the recorder by the camera over Ethernet 攝影機通過乙太網路發送到記錄器的信號			

2. Camera Summary 攝影機簡介



Camera Name 攝影機名稱	Camera 1
Camera Model 攝影機型號	Mobotix M26
Model Number 攝影機號碼	M26b
Serial Number 序號	10.28.100.137
Resolution(s)解析度	1280*1024
Frames per Second 幀率	2
Recording trigger 記錄觸發器	Departure from port 出港
Recording Exceptions 記錄例外情況	At harbor, night 在港口, 晚上
Setting triggers 設置觸發器	
Location 位置	Front deck
View 視野	Fishing deck, 釣魚甲板, 海港邊
Aim (e.g., down, across the deck) 瞄準 (例如, 向下, 穿過甲板)	Vessel situation 漁船情況





Camera Name 攝影機名稱	Camera 2
Camera Model 攝影機型號	Mobotix M26
Model Number 攝影機號碼	M26b
Serial Number 序號	10.28.137.35
Resolution(s)解析度	1280*1024
Frames per Second 幀率	5
Recording trigger 記錄觸發器	Fishing operation (speed and trajectory) 漁船作業(速度和軌跡)
Recording Exceptions 記錄例外情況	At harbor 在港口
Setting triggers 設置觸發器	At harbor, night 在港口, 晚上
Location 位置	Back deck
View 視野	Fishing deck 釣魚甲板
Aim (e.g., down, across the deck) 瞄準 (例如, 向下, 穿過甲板)	



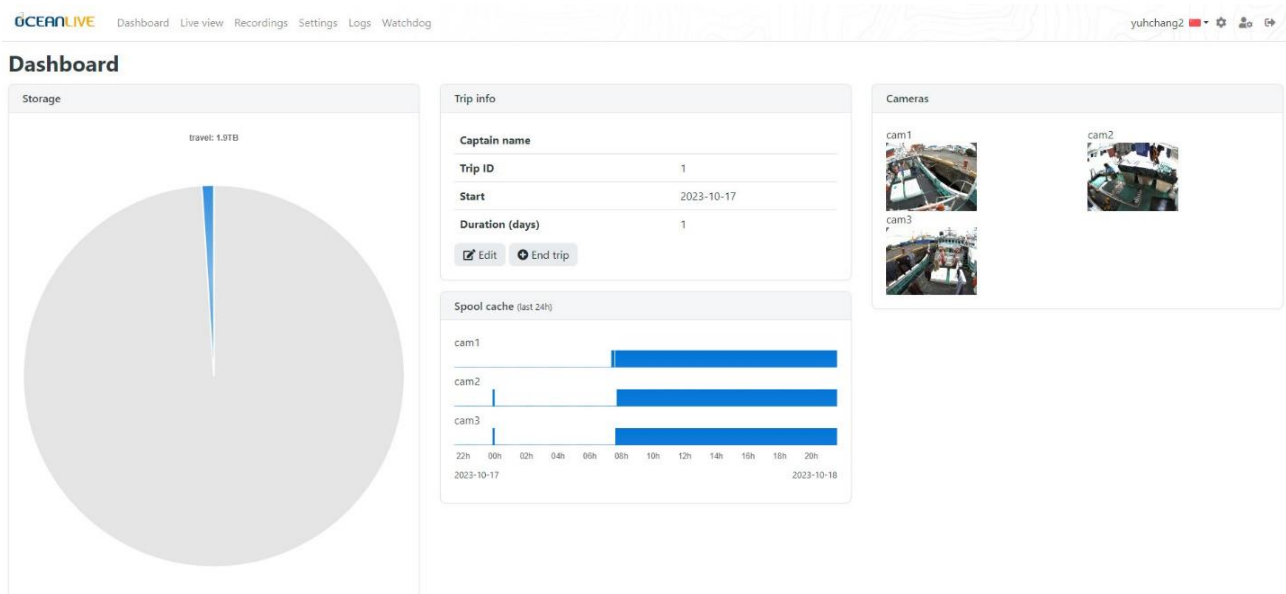
MOBOTIX M26 CAM3 Live

16 fps | Display Mode | Full Image | vHQ

- Admin Menu
- Setup Menu
- Arm & Record
- Audio on
- MxPEG on
- MxPEG off
- UC Event
- LEDs Blink
- Play Sound
- Play Last Event
- Event List
- Multivatcher
- 1x Zoom
- Zoom +
- Zoom -
- Center Pan

Camera Name 攝影機名稱	Camera 3
Camera Model 攝影機型號	Mobotix M26
Model Number 攝影機號碼	M26b
Serial Number 序號	10.28.240.2
Resolution(s)解析度	1280*1024
Frames per Second 幀率	2
Recording trigger 記錄觸發器	Departure from port 出港
Recording Exceptions 記錄例外情況	None - Records 24/7 無-紀錄 24/7
Setting triggers 設置觸發器	Departure from port 出港
Location 位置	Roof of the bridge
View 視野	Fishing deck
Aim (e.g., down, across the deck)	

XI.EM System Operation 電子觀察員系統操作



XII.EM System Errors 電子觀察員系統錯誤

Describe types of malfunctions: 描述故障類型：

- Critical Malfunctions 嚴重故障
 - Malfunctions that prevent data collections 阻止數據資料收集的故障
- Non-critical 非關鍵型
 - Malfunctions that do not prevent data collection. 不妨礙數據資料收集的故障。

Most malfunctions will be addressed remotely by THALOS' operation teams, thanks to satellite communication. 借助衛星通信，大多數故障將由 THALOS 的操作團隊遠端解決。

Procedure for addressing malfunctions: 解決故障的程序：

- Pre-trip malfunctions 行程前故障
- Mid-trip malfunctions 中途故障

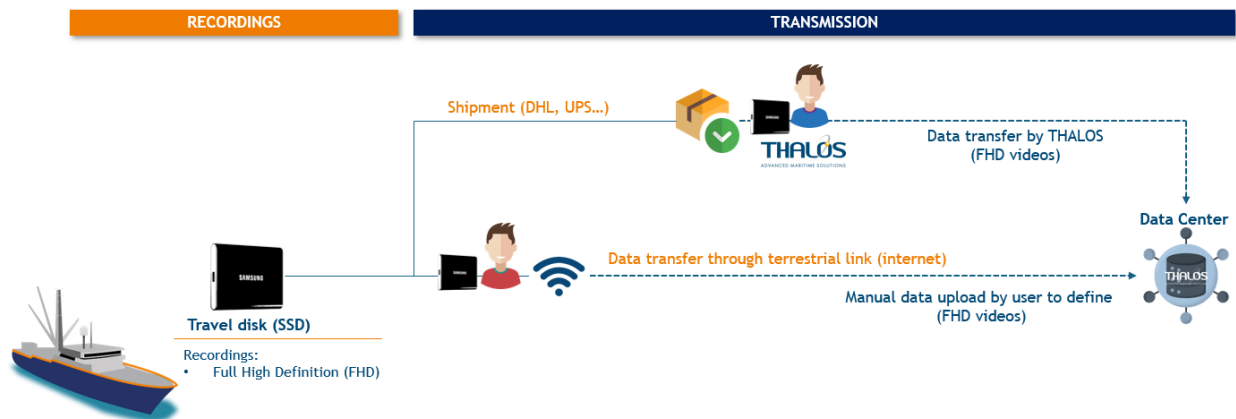
XIII.EM System Troubleshooting 電子觀察員系統故障排除

See procedure attached in appendix.

XIV.EM Maintenance Plan 電子觀察員系統維護計畫

See Appendix at the end of the document (English & Chinese)

XV.Data Workflow 數據資料工作流程



XVI. Review Protocol 審查協定

Video and associated sensor and meta-data from each fishing trip will be delivered to an EM analyst to generate annotated data on fishing activity for the trip. The EM analyst will review a random selection of 20% of the full sets (i.e., partial sets will be removed from the random sampling universe) made on the fishing trip and will generate data on overall fishing effort (e.g., number of sets, number of hooks), catch events (target, non-target, and SSI), and potential compliance events (e.g., pollution, improper handling of SSI, gear compliance). The program will not be actively tracking non-fishing related activities (i.e., social/labor practices). Data from each trip will be summarized in a trip report that will be shared with the fishing company, vessel owner, and/or vessel operator and the supply chain sponsor. The program will use the reports and data generated from EM systems to support a continuous improvement process. Individual vessel data will not be shared with regulatory authorities without the explicit consent of the fishing company, vessel owner, and/or vessel operator unless mandated by a legal requirement.

來自每次漁撈作業的影片和相關傳感器及元數據將被傳送給電子觀察員分析師，以產出有關該航次捕撈作業活動的註釋數據資料。電子觀察員分析師將審查在捕撈作業航程中隨機選擇的 20% 完整捕撈作業（也就是說，部分作業將從隨機抽樣範圍中刪除），並將生成有關總體捕撈努力量的數據資料（例如，作業次數、掛鉤數量）、捕獲事件（目標、非目標和 SSI?）和潛在合規事件（例如，污染、SSI 處理不當、漁具合規性）。該計劃將不會主動追蹤與捕魚無關的活動（即社會/勞動行為）。每次航程的數據資料將匯總在一份航次報告中，該報告將與漁業公司、船東和/或船舶經營者以及供應鏈贊助商共享。該計劃將使用電子觀察員系統產生的報告和數據資料來支持持續改進過程。除非法律要求強制執行，否則未經漁業公司、船東和/或船舶經營者的明確同意，不得與監管機構共享各別漁船數據資料。

Data generated from the review of EM video and sensor data will support the objectives of fishery improvement projects, meeting data requirements for Marine Stewardship Council certification, and to provide evidence of sustainable fishing practices that can be communicated to the market. Relevant video clips with footage of target and non-target species catch will also be shared and included in the anonymized fishnet.ai image library that TNC has developed, or other libraries for the sole purpose of aiding the development of open-source automation tools to help reduce the cost and increase the efficiency of back end video review efforts.

從審查電子觀察員的影片和傳感器數據產生的數據資料將支持漁業改進專案的目標，滿足海洋管理委員會認證的數據要求，並提供可向市場傳達的可持續性捕魚做法的證據。包含目標和非目標魚種捕獲鏡頭的相關影片剪輯也將被分享並收錄在 TNC 開發的匿名 fishnet.ai 圖像庫，或其他圖書館，唯一目的是幫助開發開源自動化工具以幫助降低成本和提高後端視頻審查工作的效率。

XVII.APPENDIX I

OCEANLIVE INSTRUCTIONS BY THALOS

System presentation

1. Camera overview

OceanLive solution integrates video cameras



- When the LEDs light up green, camera is running
- When the LEDs light up red, this doesn't mean an error

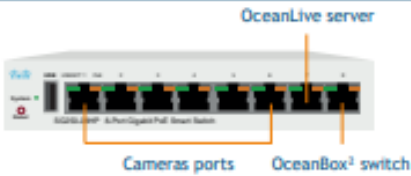
2. Rack overview



In addition to the cameras, OceanLive solution integrates a rack composed of 4 elements:

- An OceanBox² server
- An OceanBox² switch
- An OceanLive server
- An OceanLive switch

3. OceanLive switch



OceanLive switch allows to connect all the onboard cameras to the OceanLive Server with PoE cables.

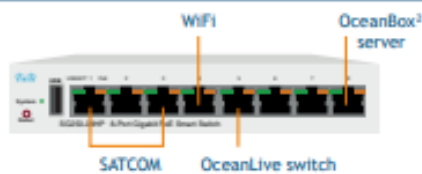
- When the LEDs light up green, the network link is active
- When the LEDs light up orange, the data is in transit

4. OceanLive server



OceanLive server allows to make the video recordings, to store them, to generate the logs and the videos to export and integrates the AI.

5. OceanBox² switch



OceanBox² switch allows to connect the communication systems to the on-board networks

6. OceanBox² server



OceanBox² server allows to secure and optimize OceanLive data transmission:

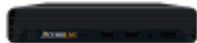

- sending logs and videos
- snapshots management



XVIII.APPENDIX II

OCEANLIVE BY THALOS INSTRUCTIONS



Start, Shutdown, Reboot

Start OceanLive system







 1- Press the power button on OceanLive server ▶ A white LED lights up when the OceanLive server is turned on	 2- Press the power button on OceanBox server ▶ The button turns green when the OceanBox is turned on
--	---

 Make sure the OceanLive and OceanBox switches are plugged in. 


Shutdown or reboot OceanLive server

<p>To shutdown OceanLive server :</p>  1- Press the power button on OceanLive server ▶ The white LED turns off when the OceanLive server is off	<p>To reboot OceanLive server :</p>  1- Shutdown OceanLive server 2- Press start button
--	---

Shutdown or reboot OceanBox Server

<p>1- Connect to OceanBox Portal:</p>  2- Click on the -System power actions- button at the top right of the page  3- Click on -Shutdown- or -Reboot-:  <p> Please prefer this option to turn off the system, the physical shutdown is to be chosen only in case of problem.</p>	<p>In case of problem, you can shutdown physically the server</p>  1- Press the power button on OceanBox server ▶ The button turns red when the OceanBox is turned off <p> Wait 10 seconds before rebooting.</p>
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Helpdesk
helpdesk@thalos.fr | +33 (0)2 97 88 18 00 | +33 (0)9 69 39 88 86


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XIX.APPENDIX III

OCEANLIVE BY THALOS INSTRUCTIONS

Operational maintenance

1. System Status

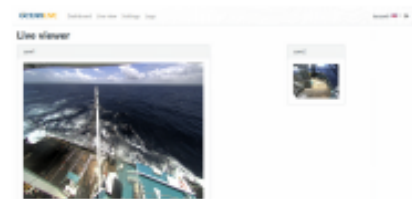
You can check the system status through OceanLive Portal :

- Connect to OceanLive Portal by entering the following url in your browser : <http://192.168.200.5:5003>
- Check on -Dashboard- tab, the storage, recording and cameras status and GPS information



2. Cameras status

- Connect to OceanLive Portal by entering the following url in your browser : <http://192.168.200.5:5003>
- Check on -Live viewer- tab, that all cameras are displayed on the screen



! If the images appear deteriorated, clean the camera's lens cover

XX.APPENDIX IV

OCEANLIVE BY THALOS INSTRUCTIONS

System recovery



These operations should only be carried out on the request of the THALOS support (helpdesk@thalos.fr)

1. Restoration key



A restoration key has been given to you by the THALOS technical service.

Please keep this key in a safe place on the vessel before any departure.



Do not plug this key into a computer, as this may compromise all the data of the computer.

2. Recovery



1. Turn off the OceanLive computer by following the shutdown procedure

2. Insert the USB key into one of the OceanLive server USB ports

3. Turn on the OceanLive server

4. The first beep will be a BIOS load

5. 20 beeps will sound to alert of the installation start. The installation will run silently for a few minutes

3. End of procedure



6. A melody is played at the end of the installation and OceanLive closes

7. Remove the USB key before resetting the OceanLive server



The USB key must not be left plugged into any USB port or the installation will automatically run in the event of an OceanLive reset.

Helpdesk

helpdesk@thalos.fr | +33 (0)2 97 88 18 00 | +33 (0)9 69 39 88 86

XXI.APPENDIX V

OCEANLIVE INSTRUCTIONS

BY THALOS

Trouble shooting

1. If the image of one of the cameras is not displayed on the software:



- Check on the related camera that at least one of the two LEDs is on
 - > If no LEDs are lit, check the camera connection
 - > If at least one LED is lit, reboot the camera by unplugging and replugging the Ethernet cable from the corresponding camera on the OceanLive switch



- > If the image is still not displayed after rebooting the camera, please contact the THALOS helpdesk



Please note that when the red LED is on, it does not necessarily indicate a technical problem

2. If the external disk is missing on «D» drive:



- Turn off the OceanLive computer by following the shutdown procedure



- Unplug and replug the external drive



- Reboot the OceanLive system by following the procedure

- > If the external disk is still missing on «D» drive please contact the THALOS helpdesk

Helpdesk
helpdesk@thalos.fr | +33 (0)2 97 88 18 00 | +33 (0)9 69 39 88 86

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