TWELFTH REGULAR SESSION
Bali, Indonesia
3-8 December 2015

E-Reporting System-ISSF-2015

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The E-Reporting System Developed by Taiwan Fisheries Agency

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Why the trial was undertaken?

- In Taiwan, many small long-line vessels having length of less than 24 meter operate around coastal waters, the South Pacific, the Indian Ocean and etc.
- The tight space can only accommodate limited number of crews, any extra personnel, such as human observer, on board may result in a considerable burden.
- A proper E-Observing System having the similar functions might replace the on board observer's duties.

What the trail did ?

The E-Observing System consists of two sub-systems:

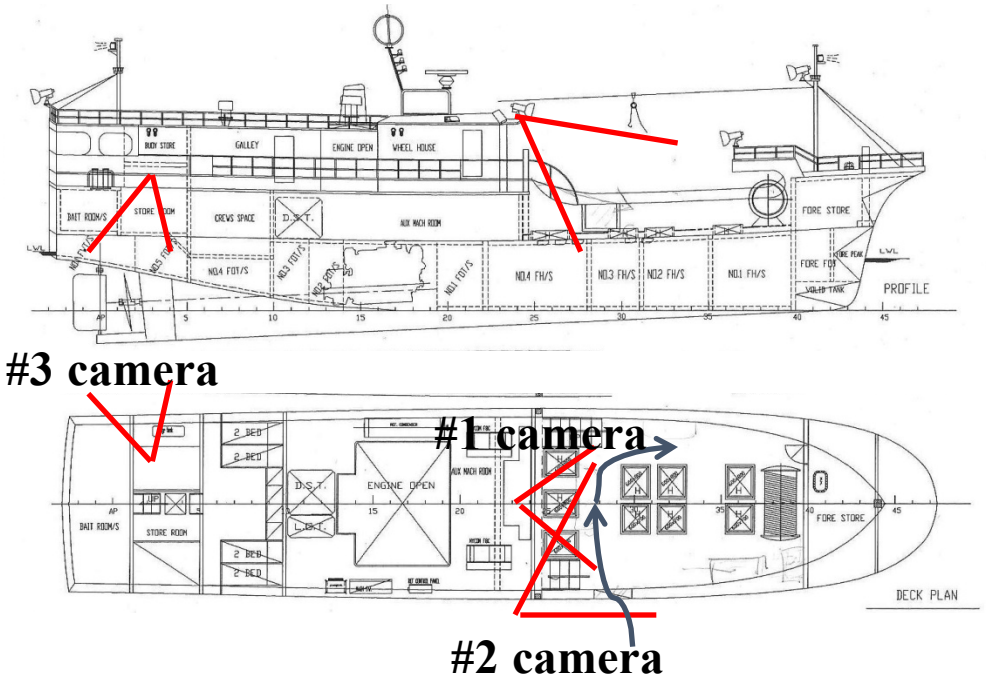
- The E-Monitoring System takes bait casting and hauling operation images by several cameras and saves it on a digital video recorder.
- The E-Reporting System is a software, which helps operator retrieve the valuable data from the recovered video.
- It had been tested on a 17 meter long long-line fishing vessels for more than one year.

This presentation focuses on E-Reporting System:

1. How it works.
2. What information can be gotten from this system.

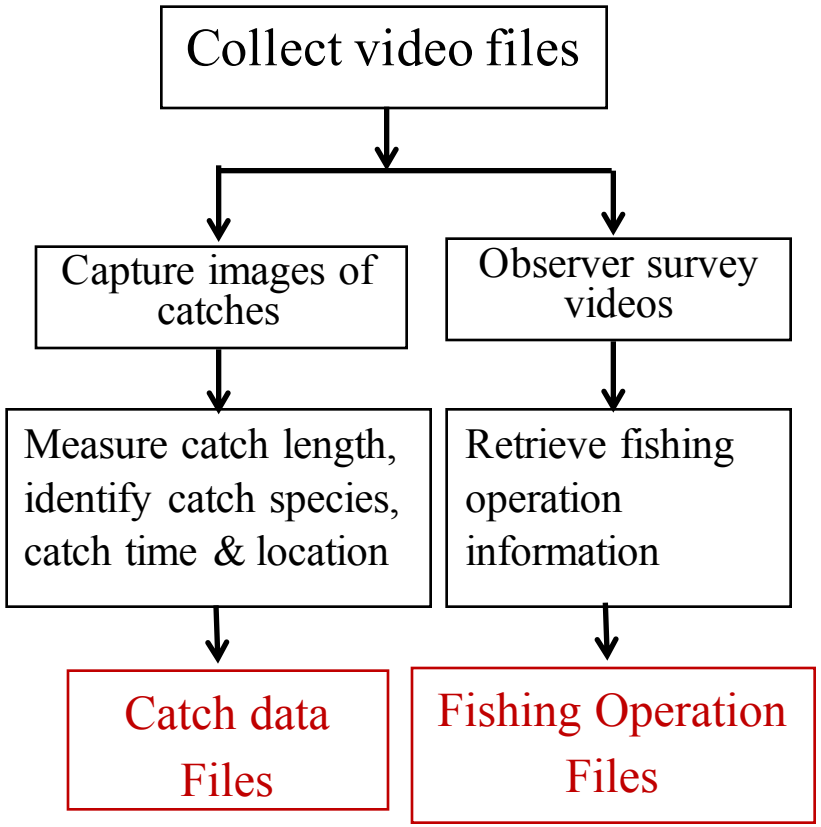
The E-Observing System includes two sub-systems

E-Monitoring System



video recovery

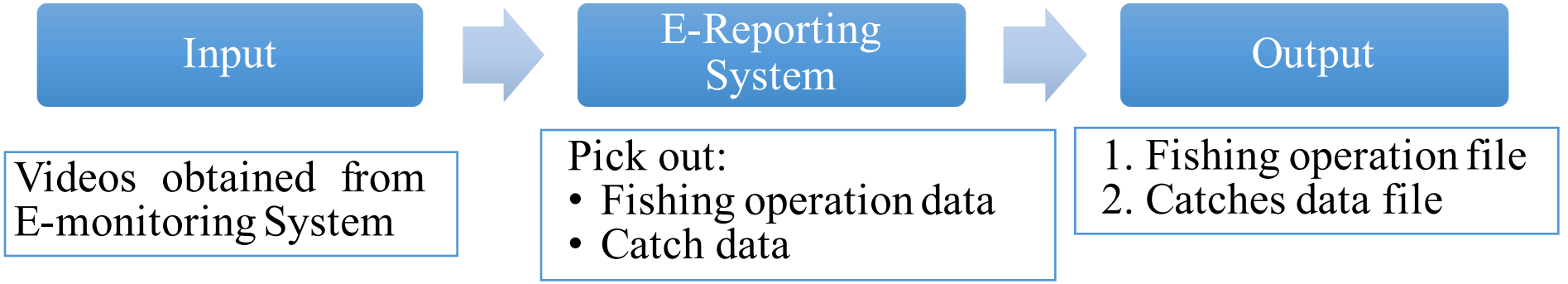
E-Reporting System

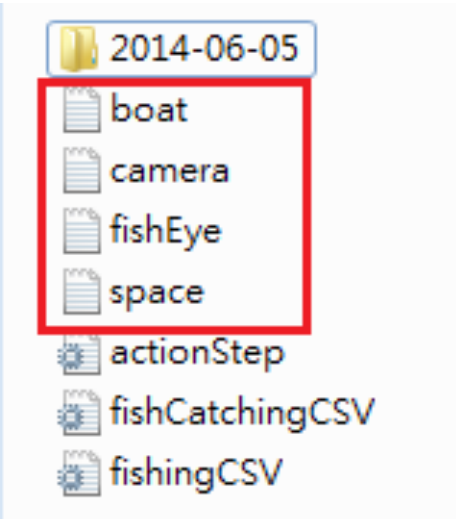


#1 、#2 cameras synchronize with hailing operation

#3 camera synchronizes with bait casting operation.

- Input : Videos obtained from the E-monitoring System.
- By using the E-Reporting System, on shore observer surveys these videos, pick out fishing operation data and performs catch analysis.
- Output : fishing operation file and catches data file.
- To perform this system four files were created as E-Monitoring System was installed.

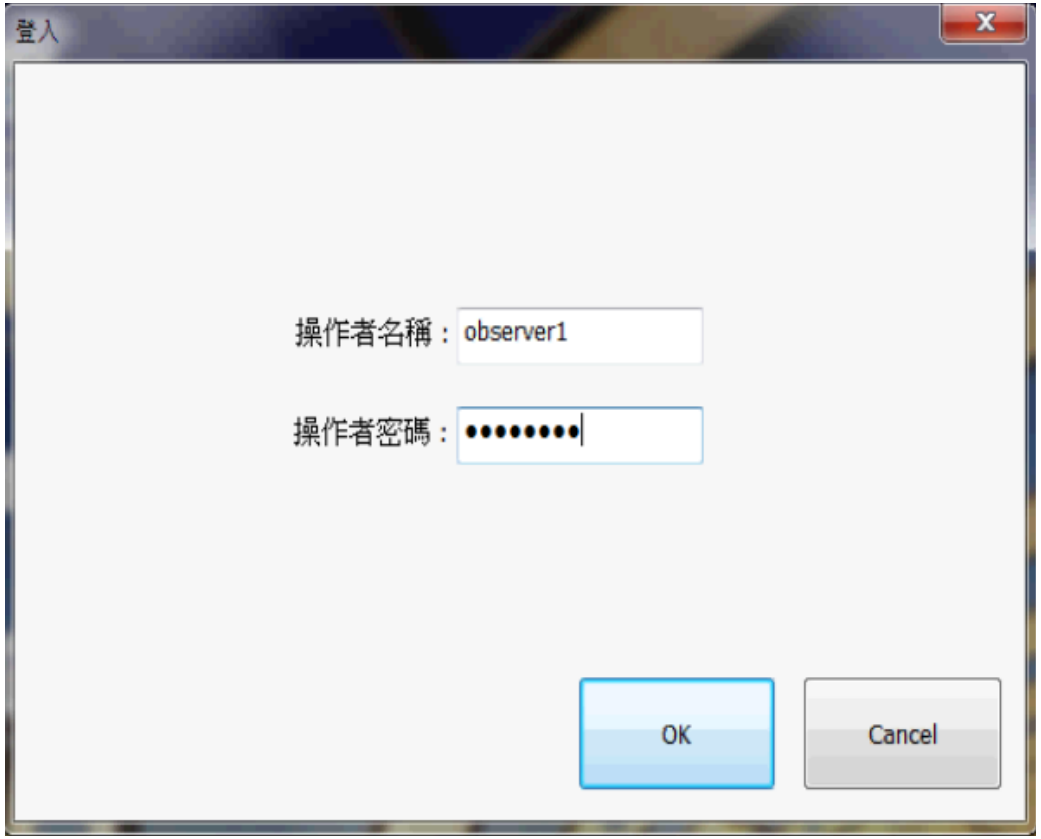




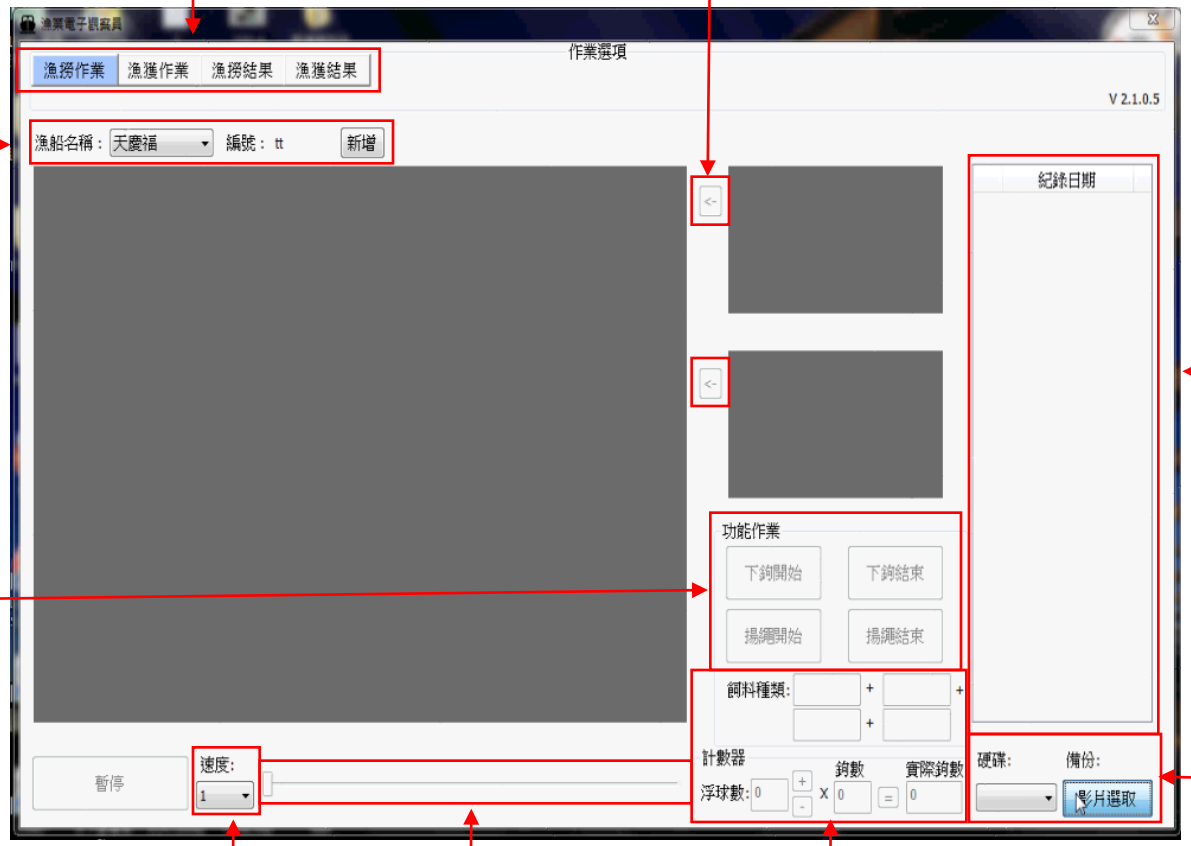
Log in

Select fishing vessel name

Select Video file name



User Interface



Log in

Select fishing vessel

Select Function key and Video file name

Select vessels name.

Log in

Select fishing vessel

Select Function key and Video file name

Fishing Operation Function Key

Available video files list

Video selection key

- Set Casting Start Time
- Input Casting Information
- Set Casting End Time
- Set Hauling Start/End Time
- Display Fishing Operation Data

Casting Operation Video On

Click Casting Start Key

The longitude, latitude and time will be recorded automatically after clicking.

- Set Casting Start Time
- Input Casting Information
- Set Casting End Time
- Set Hauling Start/End Time
- Display Fishing Operation Data

Fill in
1. hooks number
2. baits type(four type max)

- Set Casting Start Time
- Input Casting Information
- Set Casting End Time
- Set Hauling Start/End Time
- Display Fishing Operation Data

Click Casting End Key

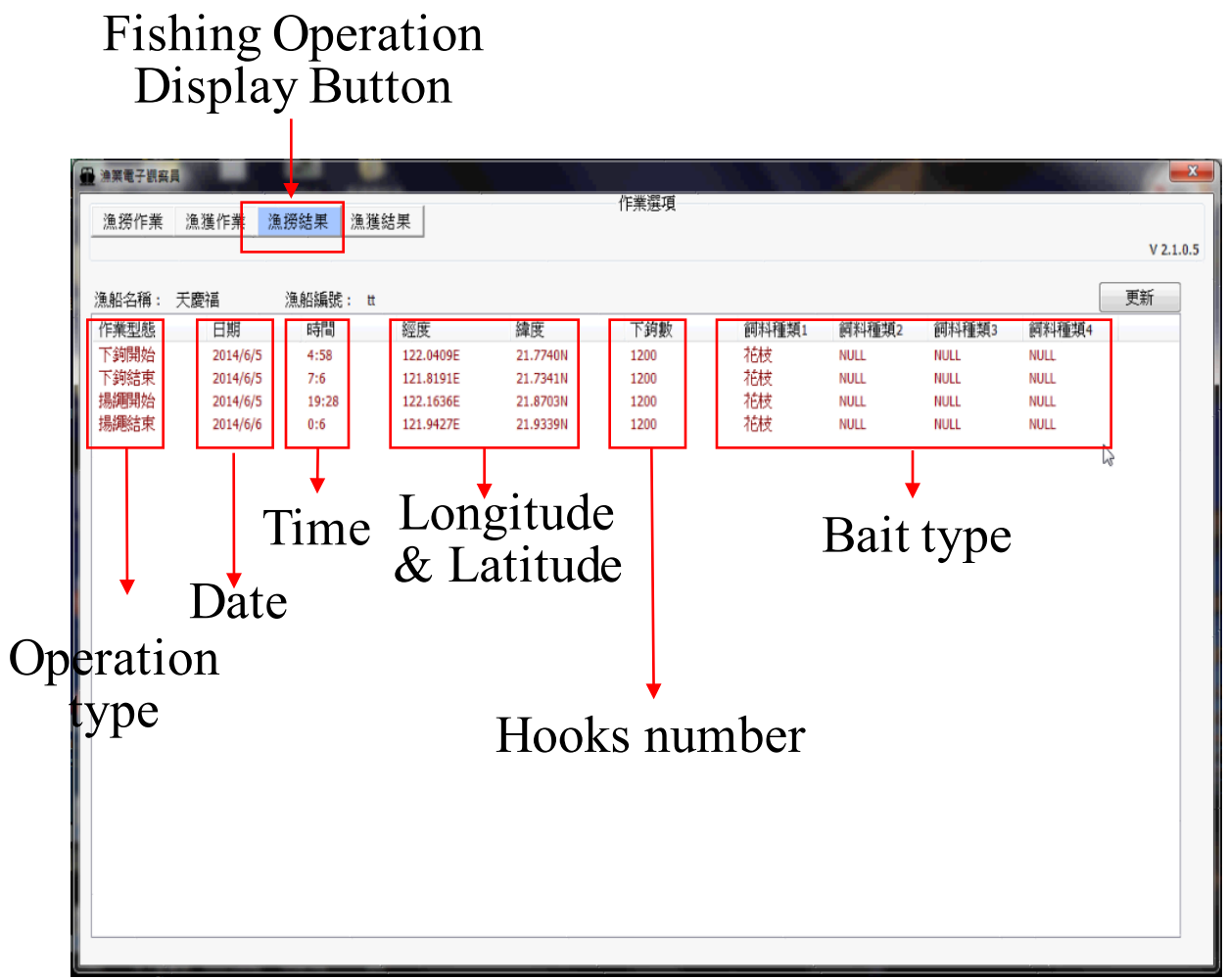
The longitude, latitude and time will be recorded automatically after clicking.

- Set Casting Start Time
- Input Casting Information
- Set Casting End Time
- **Set Hauling Start/End Time**
- Display Fishing Operation Data

Click
1. Hauling Start Key
2. Hauling End Key

The longitude, latitude and time will be recorded automatically after clicking.

- Set Casting Start Time
- Input Casting Information
- Set Casting End Time
- Set Hauling Start/End Time
- Display Fishing Operation Data



- Select Catch Analysis
- Video File Selection
- Image Capture
- Catch Species
- Length Measurement
- Display Catch Data

Select Catch Analysis Key

- Select Catch Analysis
- Video File Selection
- Image Capture
- Catch Species
- Length Measurement
- Display Catch Data

Catch Analysis On

Select the Video Files to be Analyzed

- Select Catch Analysis
- Video File Selection
- Image Capture
- Catch Species
- Length Measurement
- Display Catch Data

The current video file

Click the freeze button to catch the fish picture.

- Select Catch Analysis
- Video File Selection
- **Image Capture**
- Catch Species
- Length Measurement
- Display Catch Data

Following with the freeze click, a new interface having fish's picture will show out.

- Select Catch Analysis
- Video File Selection
- Image Capture
- Catch Species
- Length Measurement
- Display Catch Data

input the fish species

- Select Catch Analysis
- Video File Selection
- Image Capture
- Catch Species
- Length Measurement
- Display Catch Data

Click the length measurement button.

- Select Catch Analysis
- Video File Selection
- Image Capture
- Catch Species
- Length Measurement
- Display Catch Data

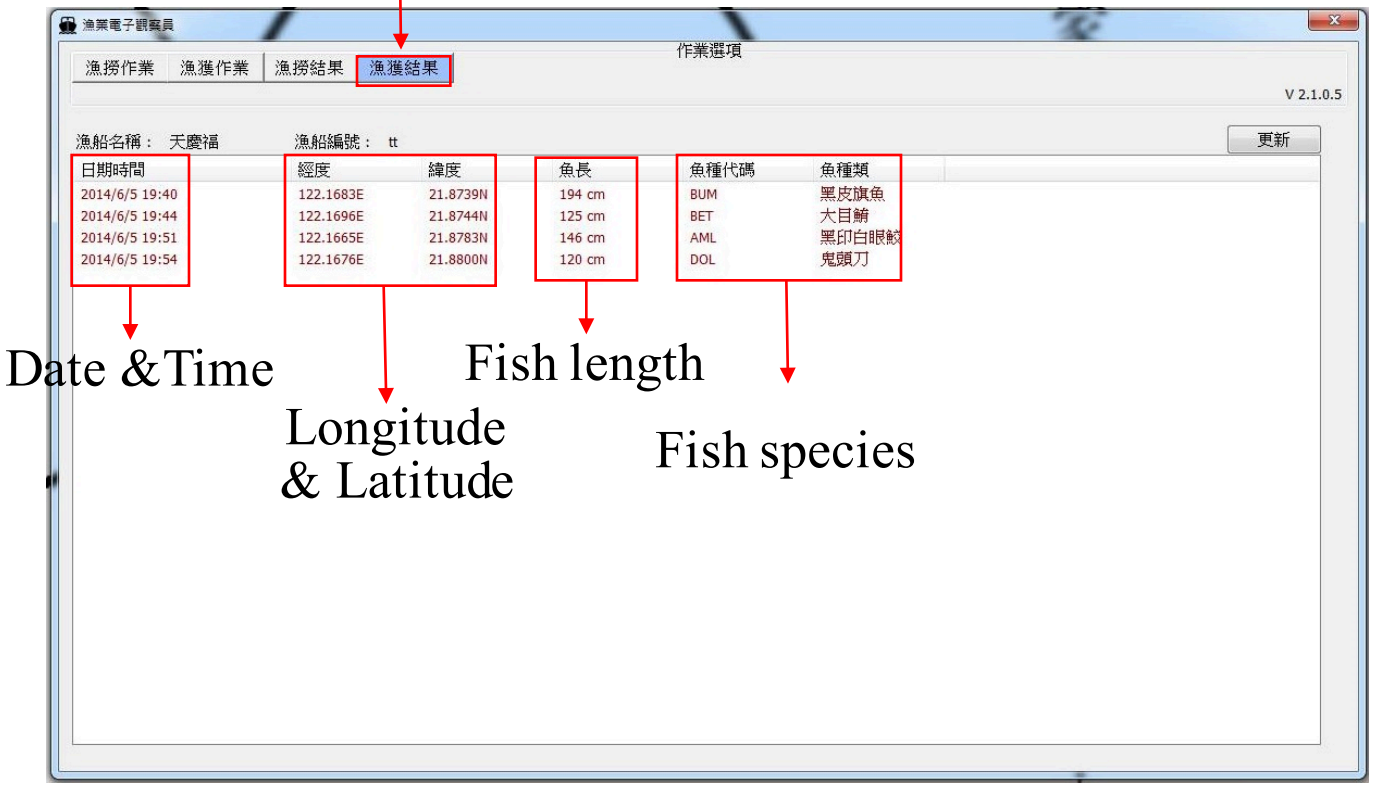
Click the pout and the tail to measure length.

Show the fish length.

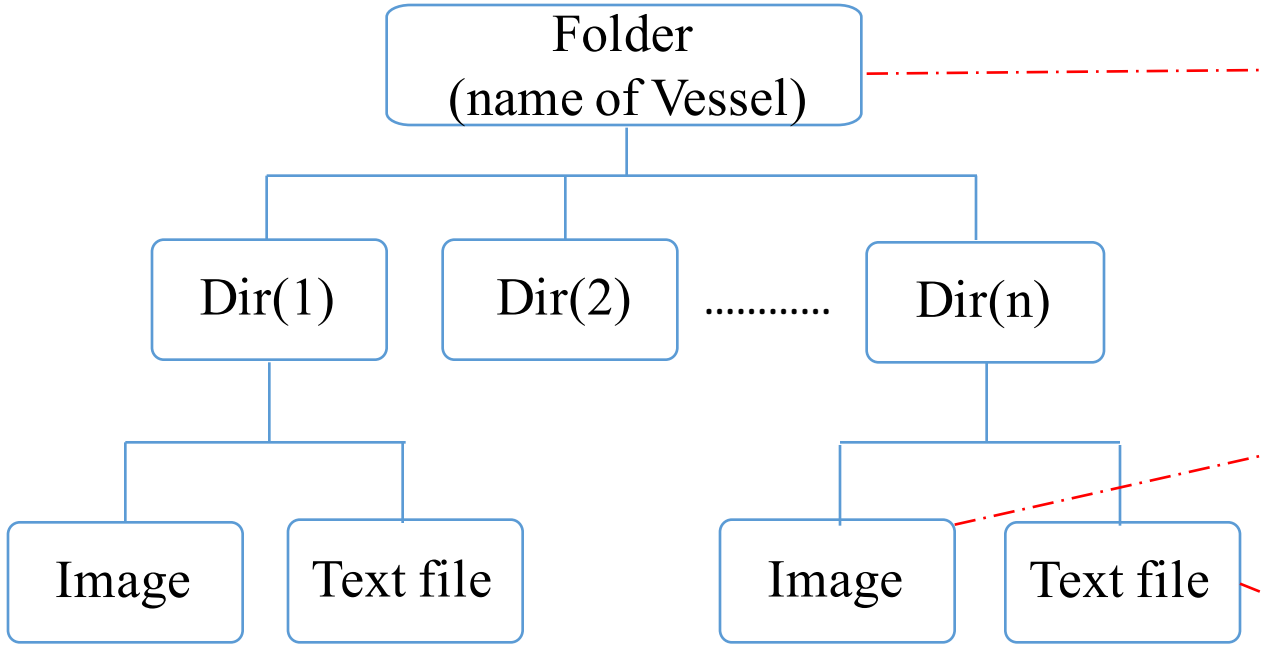
The longitude and latitude will be recorded automatically.

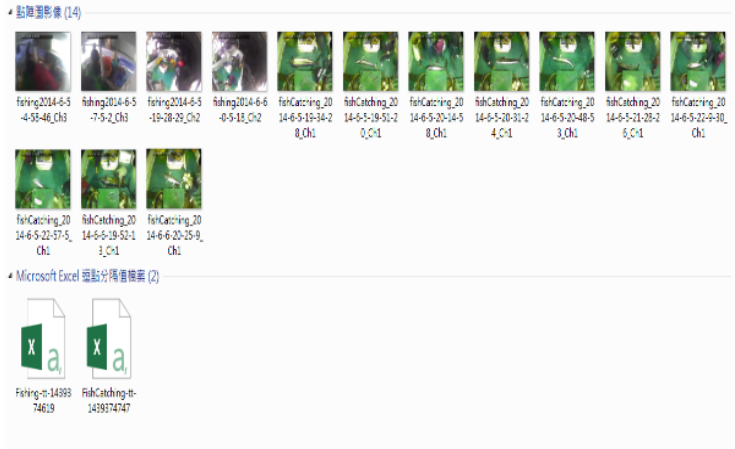
- Select Catch Analysis
- Video File Selection
- Image Capture
- Catch Species
- Length Measurement
- Display Catch Data

Catch Data Display Button.

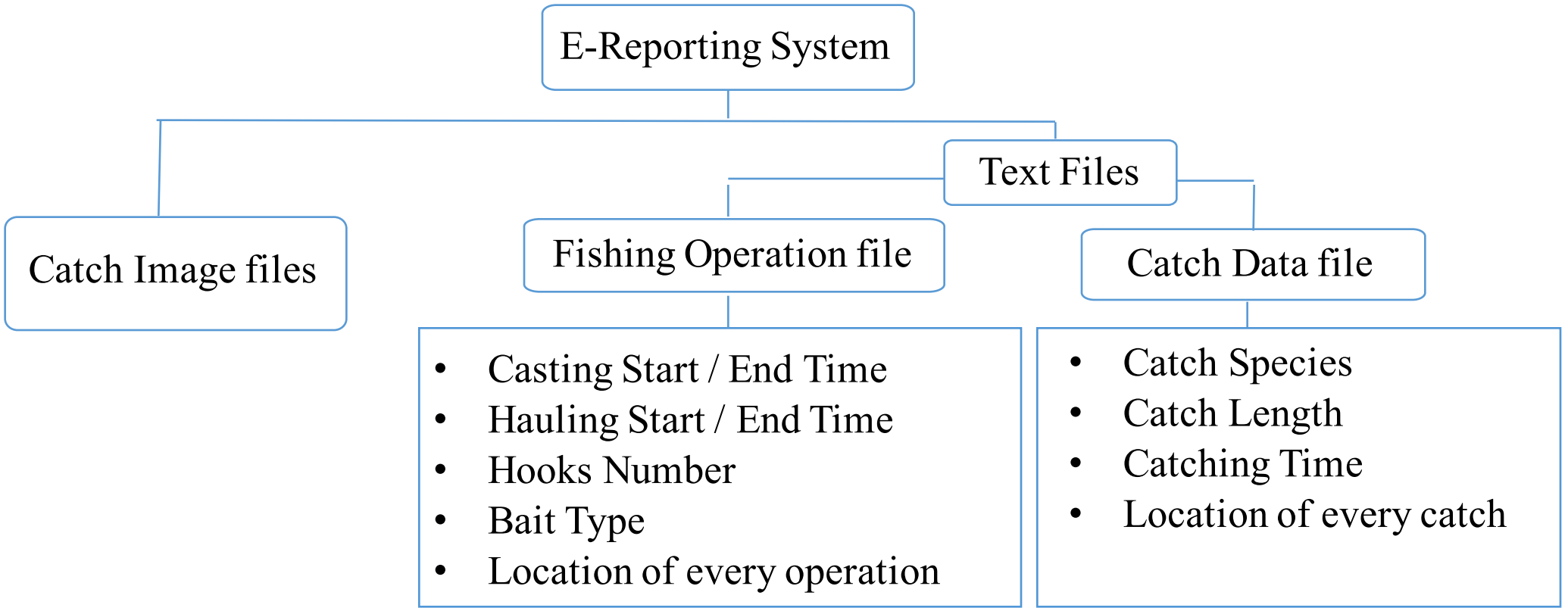


- One day fishing operation (about 16 hours) need 2 hours to survey.
- Below: The obtained file structure of the E-Reporting System
- The outcomes: Catches Image files and Text files.
- The image and detail information of every catch are saved for further usage.





It is believed that the performance of this system would play meaningful value in seafood resource conservation works and its multiple function is possible to substitute the human observer.



The lessons learn from the tests

- Crews forget to turn on/off the power switch.
- The videos can not be recovered until the fishing vessels return to harbor.
- Before being able to handle the E-Reporting System long time training is needed.
- The precise location where fishing operations was performed and each catch was caught can be collected.

The next steps

- The fishery authority expects to receive the fishing operation file and catch data files real time.
- It means that an self-determination E-Reporting System on board is required.

Thank You For Your Attention