



# DOS/SATLINK

DCC EM Workshop 16-18 October 2019, FFA, Honiara, Solomon Islands

# SeaTube as a multi-purpose solution

- Up to 8 eyes simultaneously
- Full time coverage 24/7
- Impartial and encrypted information
- Video storage without limitation as the Hard Drive Disks can be replaced at any time
- Real-time information with alarm operation
- Real and accurate data
- VMS information
- Shipowner-Vessel chat system



# Satlink Seatube Family

## SeaTubeLite



## Seatube

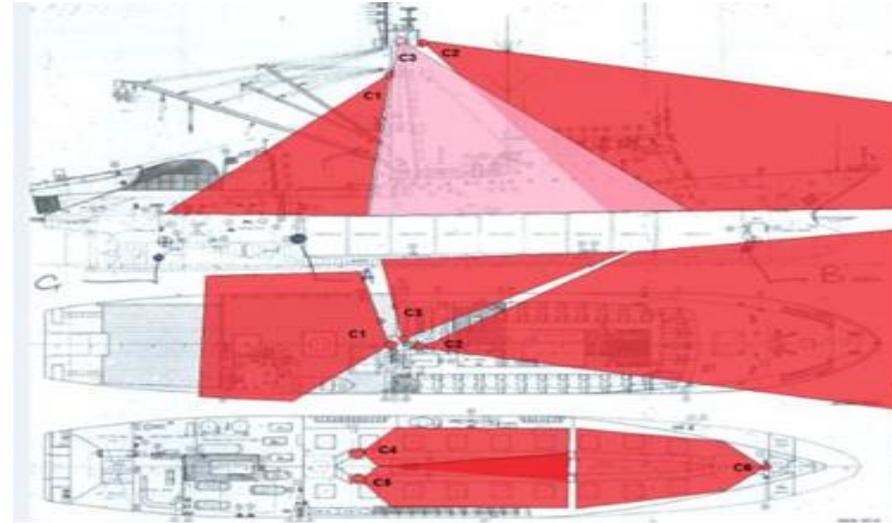


## Seatube Nano

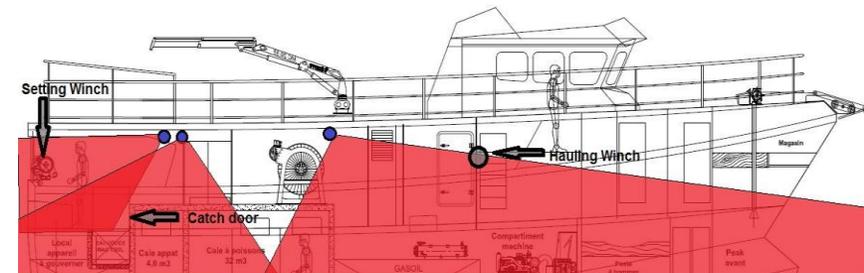


# Design camera positions

- Tailor made design for each vessel:
  - Maneuver type
  - Length, equipment
  - Fishing area distribution...



Freezer Purse-seine, 80m length, 6 cameras



Fresh fish long liner, 20m length, 3 cameras

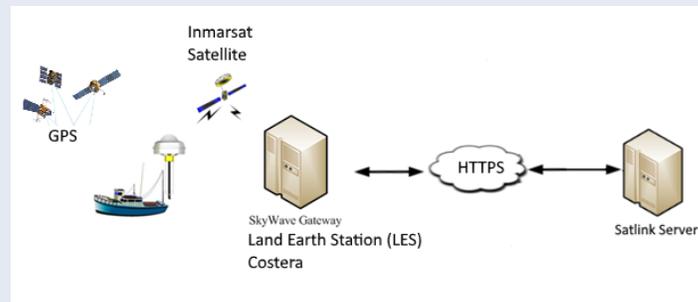
# VMS units

*Integration with type approval VMS units internationally recognize.*

After the success working with the VMS Satlink ELB2014, Satlink has got the type approval form FFA for the new VMS Satlink ELB2020 in order to integrate it with the Seatube family as a recognize source of positions and information.



- It integrates the new Satellite module from OrbComm (Inmarsat network) ST6100 series.
- It includes higher memory inside the unit to store GPS position. IT keeps 6 months of GPS positions



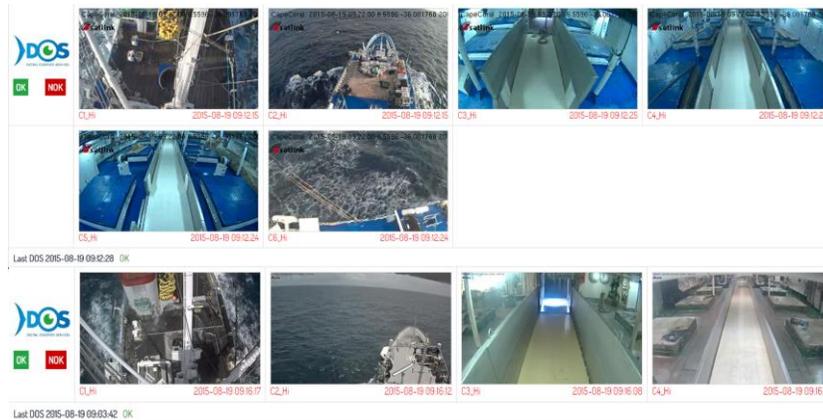
# Remote communications with the system through satellite

## Real time information about all the components

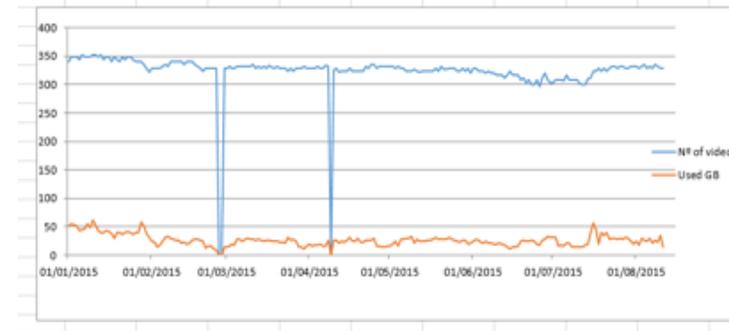
- Alarms System

Items
Cameras disfunctions
Information about VMS
NVR/Backup memory ratio
GPS positions update
Storing capacity

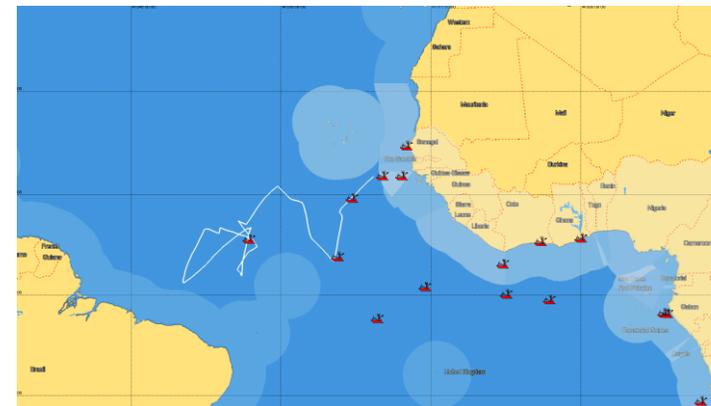
- Camera views



- Daily Memory Reports

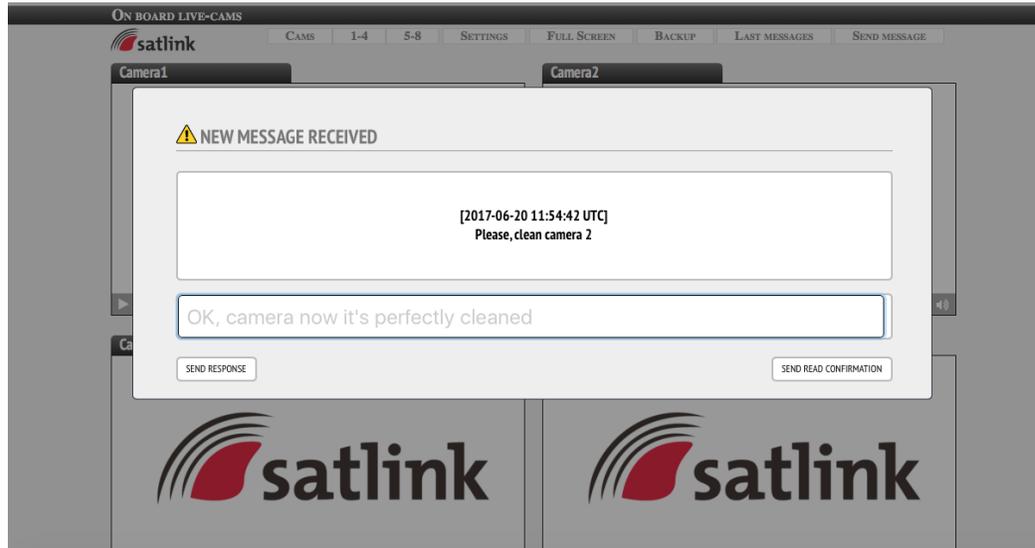


- Track information



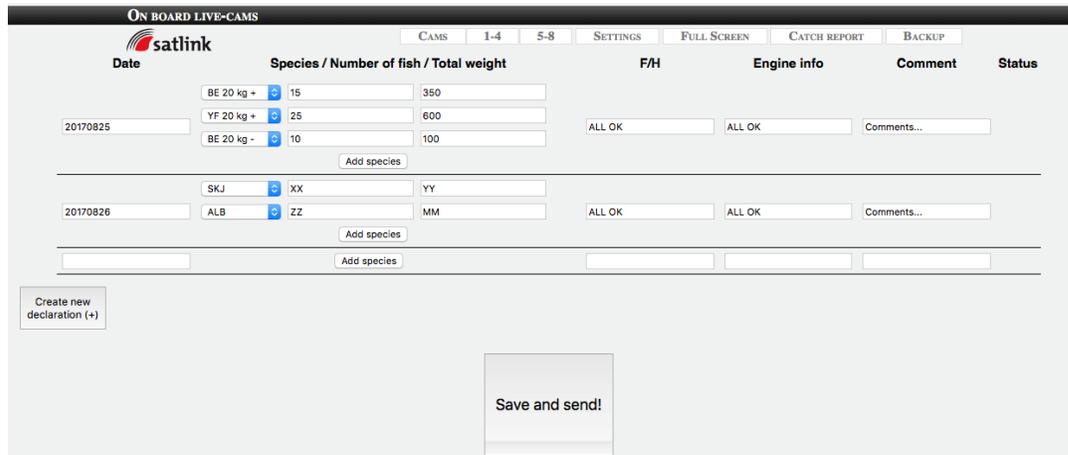
# Extra functionalities

## Communications with the same system when matters



Messages Vessel – Office - Vessel

Messages Vessel – Satlink - Vessel



Catch Report from Vessel - Office

# EM: Proven Success

Data like never before:

VMS positions

+

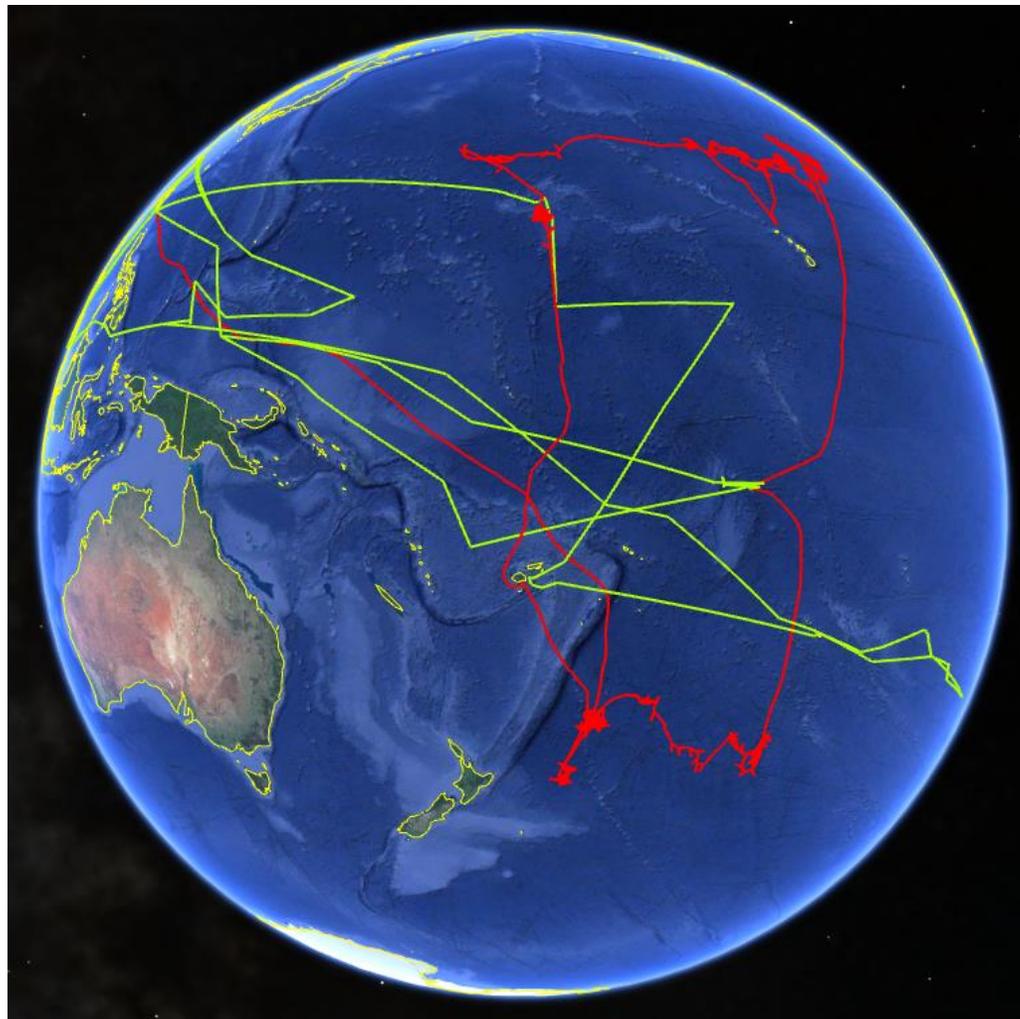
Catch data

+

Video footage

=

One year of full accountability



## SVM: EM data analysis tool and reporter

- *Adaptable to any fisheries*
- *Customizable data entry*
- *Instant analysis logbook*
- *Results file uploadable into:*
  - *TUBS*
  - *iFIMS*



# Regional Data Reviewing Centers



DOS Trained Regional Data Reviewing Center:

- Objective is to give the Regional Fishing Management Center full control over their data
- Provide training and support for land based “dry” observers in the Satlink SeaTube video analysis software
- Provide training for technicians, capable to respond to system alarms and remote management control
- Capacity building, generating employment for local observers and technicians, creating Self-Sufficient Regional Fishing Management Centers



# Actual Machine Learning in Use

## Brail detector examples



# Actual Machine Learning in Use

## Catch detection



## Future Developments

- Refine ML procedures and SW so its accuracy is enhanced
- Further develop SVM to enhance the users experience
- Working towards EM/VMS certification