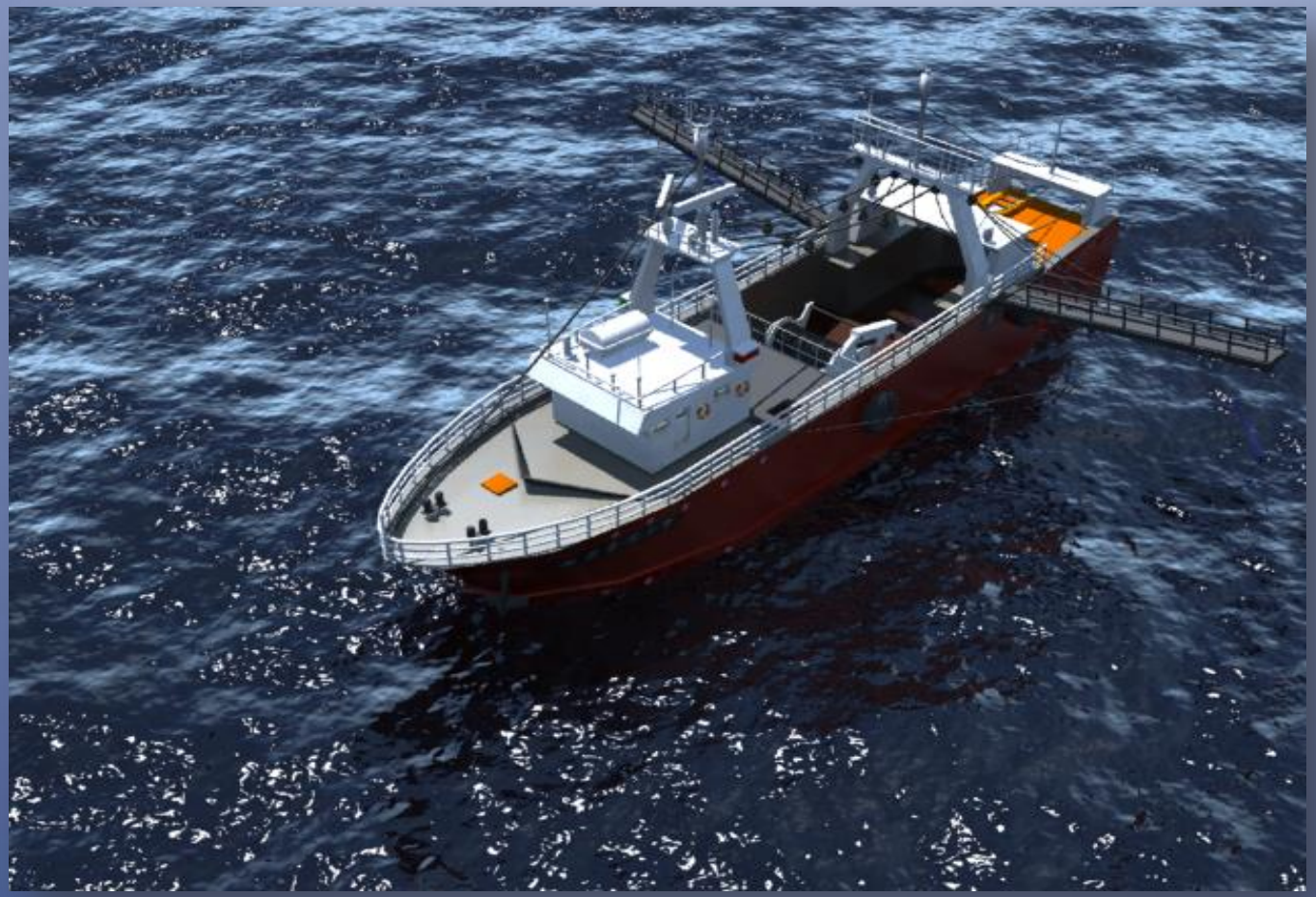

AcruxSoft

SIMULATOR FOR TRAINING IN FISHING

Gold medal at the International Exhibition of Inventions, Geneva

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www.acruxsoft.net

ASPECTS OF THE SIMULATOR FOR TRAINING IN FISHING

CONTROL OF CAMERAS AND PHOTOGRAPHIC QUALITY 3D IMAGES

ANALYSIS OF CONSUMPTION, SELECTIVITY AND EFFICIENCY

COMPUTER MODELING: SINGLE TRAWL, OUTRIGGER, PAIR, TWIN, PELAGIC

MORE THAN 20 3D MODELS OF TRAWL DOORS

CONTROL OF DEPLOYMENT

200 VARIABLE INPUT DATA

DESIGNS OF TRAWL NET: WIRE DIAMETER, CUTS, MESH, PRINT

300 DESIGNS FISHING GEAR FOR DIFFERENT TARGETS FROM SHOALS OF FISH

SIMULATION UP TO 2000 METERS DEEP

SELECTION OF SHIPS, POWER, FISHING GEAR, DOORS, NETS

SYSTEM DIAGNOSIS PROVIDED FOR THE DEPLOYMENT OF THE FISHING GEAR

THE TRAINING COURSE WITH EXPERTS IN FISHERIES TECHNOLOGY

OBJECTIVES

METHODOLOGY

PROMOTE THE SUSTAINABILITY DEVELOPMENT OF FISHING

TRAINING IN THE AREA OF ENERGY EFFICIENCY AND SELECTIVITY

FOSTER THE INNOVATION

ITERATION

5

1

SELECTION OF THE TYPE OF FISHING GEAR

2

CONFIGURATION: MESH SIZE, WIRE DIAMETER, DESIGNS OF NET, DOORS, BALLAST, FLOAT, BRIDLES, CLUMP, SPEED, DEPTH ....

3

SIMULATION

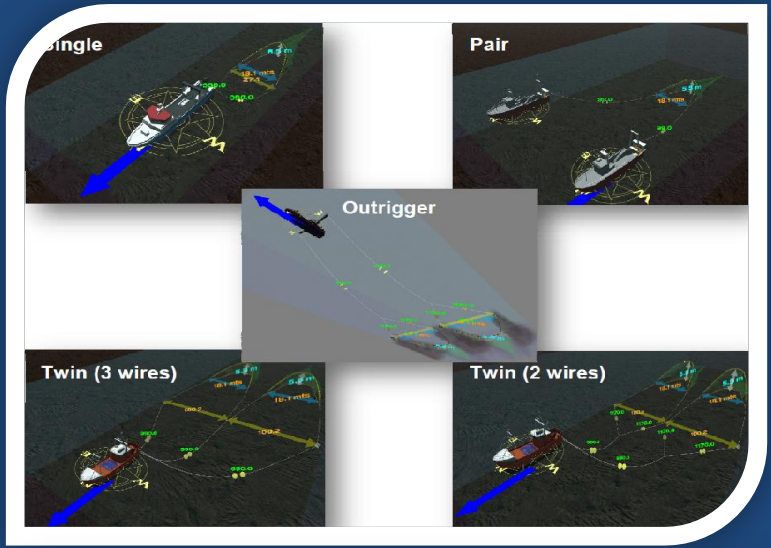
4

EVALUATION: OF CONSUMPTION, LEVEL OF SELECTIVITY, FILTERING VOLUME, DEPLOYMENT, EFFICIENCY ...

AVAILABLE FISHING METHODS

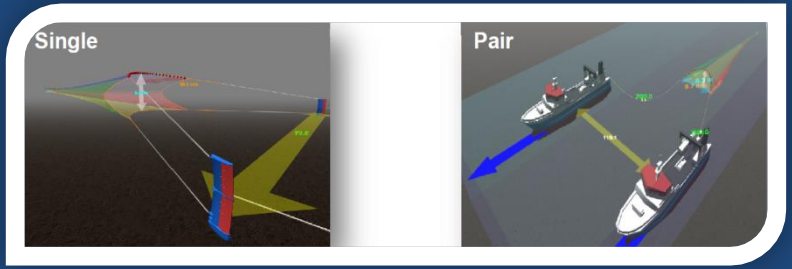
Bottom trawling:

- ❖ **Single**
- ❖ **Pair**
- ❖ **Outrigger**
- ❖ **Twin (3 wires)**
- ❖ **Twin (2 wires)**



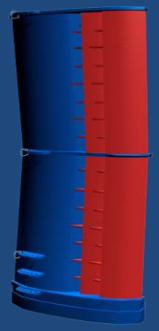
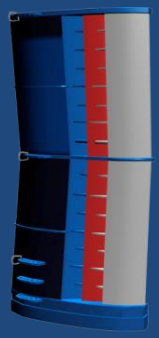
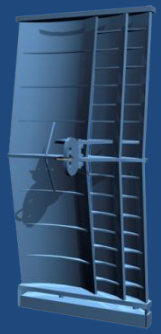
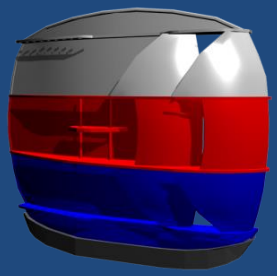
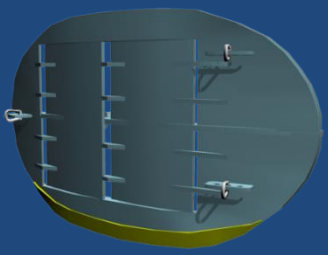
Pelagic Trawling:

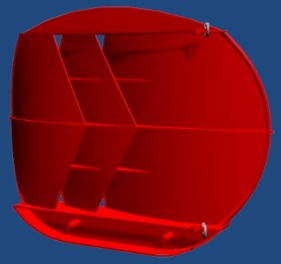
- ❖ **Single**
- ❖ **Pair**

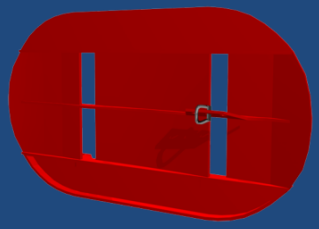
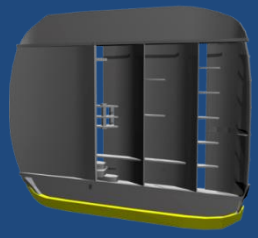
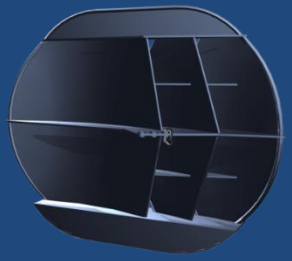
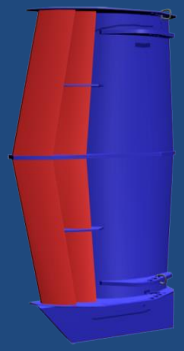
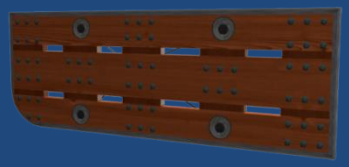
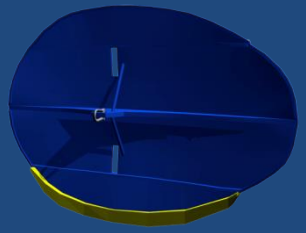


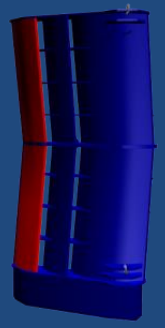
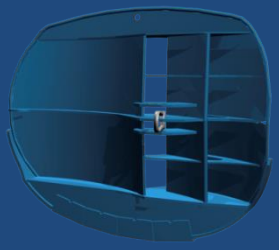
TrawlVision allows the user to input all the parameters of a trawl gear (bottom trawls with two panels or more, pelagic trawls, twin trawls and more...). The software simulates the mechanical behavior of the fishing gear, while solving the momentum equations and taking into account the hydrodynamic forces applied to each part of the gear. The geometry: any distance and co-ordinates (openings, door to door distance, depth ...). The forces: tensions in the rig, in the strengthening ropes, towing force ...

Trawl door model selection, bottom & pelagic



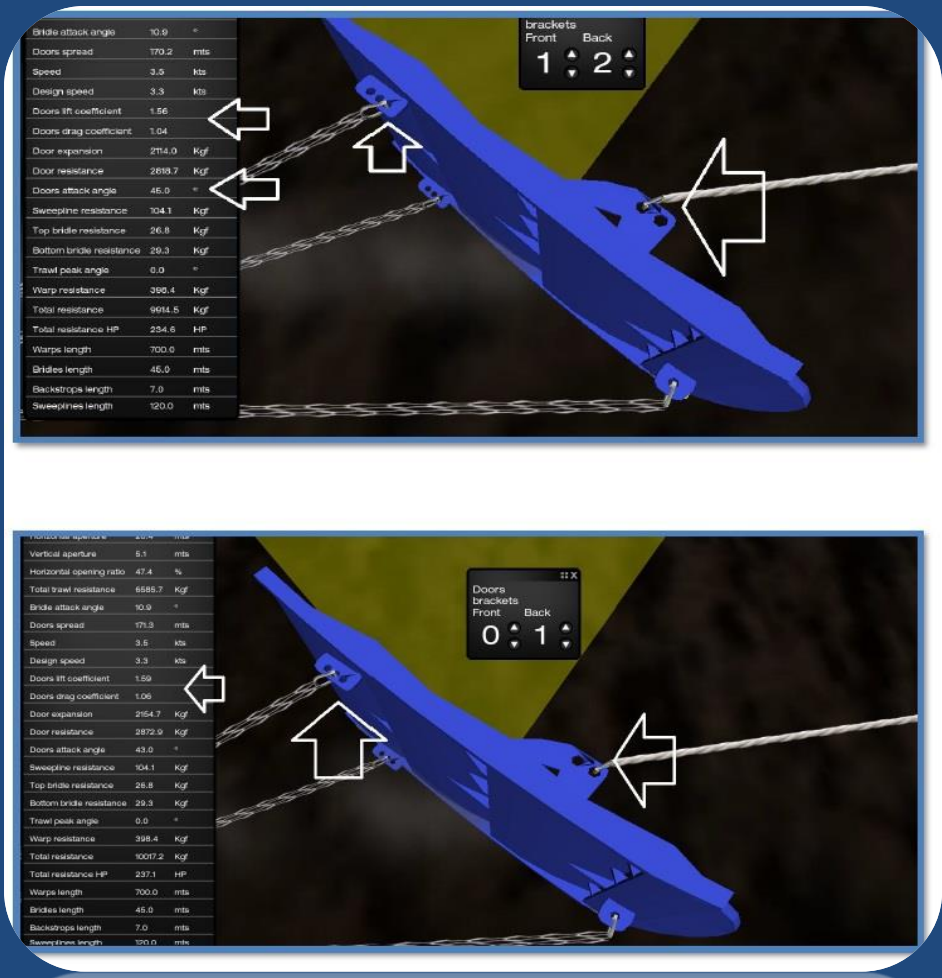



Simulation of clamping the trawl doors

- In case that the desired trawl door model is not implemented you can contact with your TRAWL VISION PRO distributor. We will need the manufacturer data sheet about CL and CD figures on the different angles of attack in order to provide you with accurate information.

- The TVS software includes several trawl door models from the main manufacturers worldwide. The user can select the desired model from the list in order to test it with their net. This model can be changed during simulation returning to this selection window.

- On the right side of the trawl door selection screen the door area must be entered (in m2) and weight (in Kg).

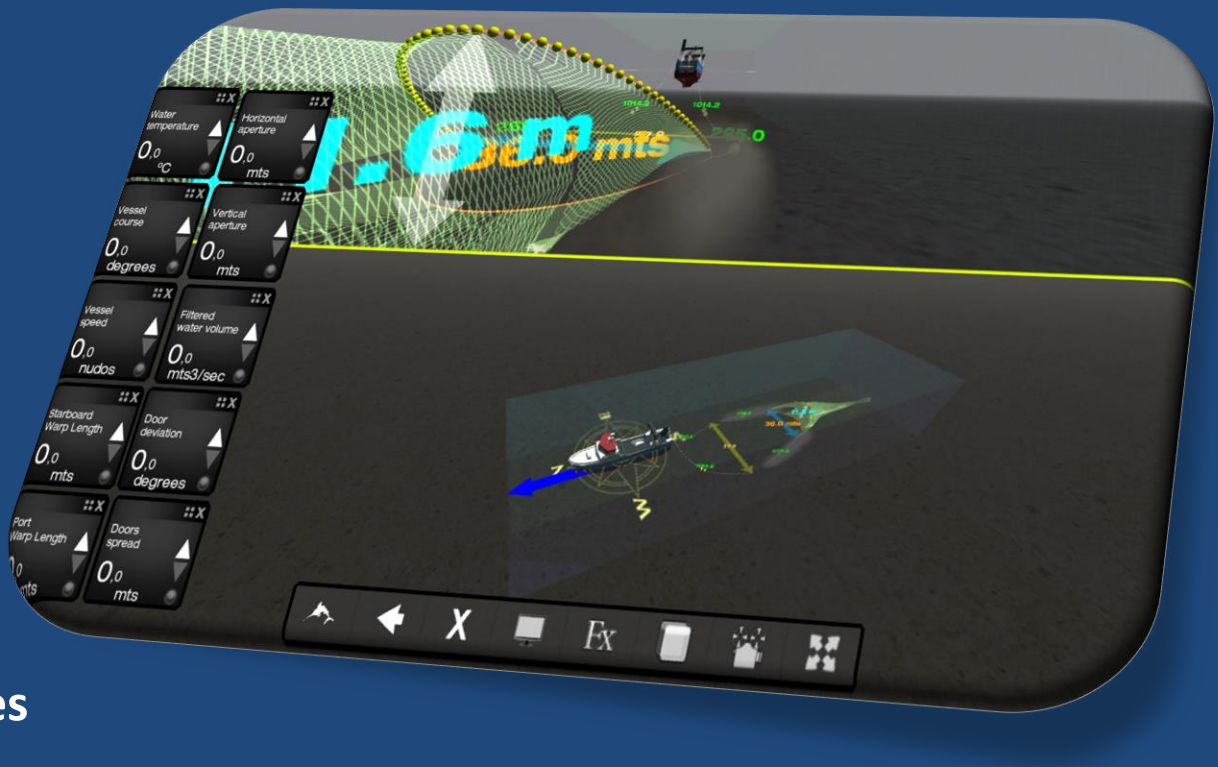


Screen Mode

- Horizontal Split
- Vertical Split
- Single

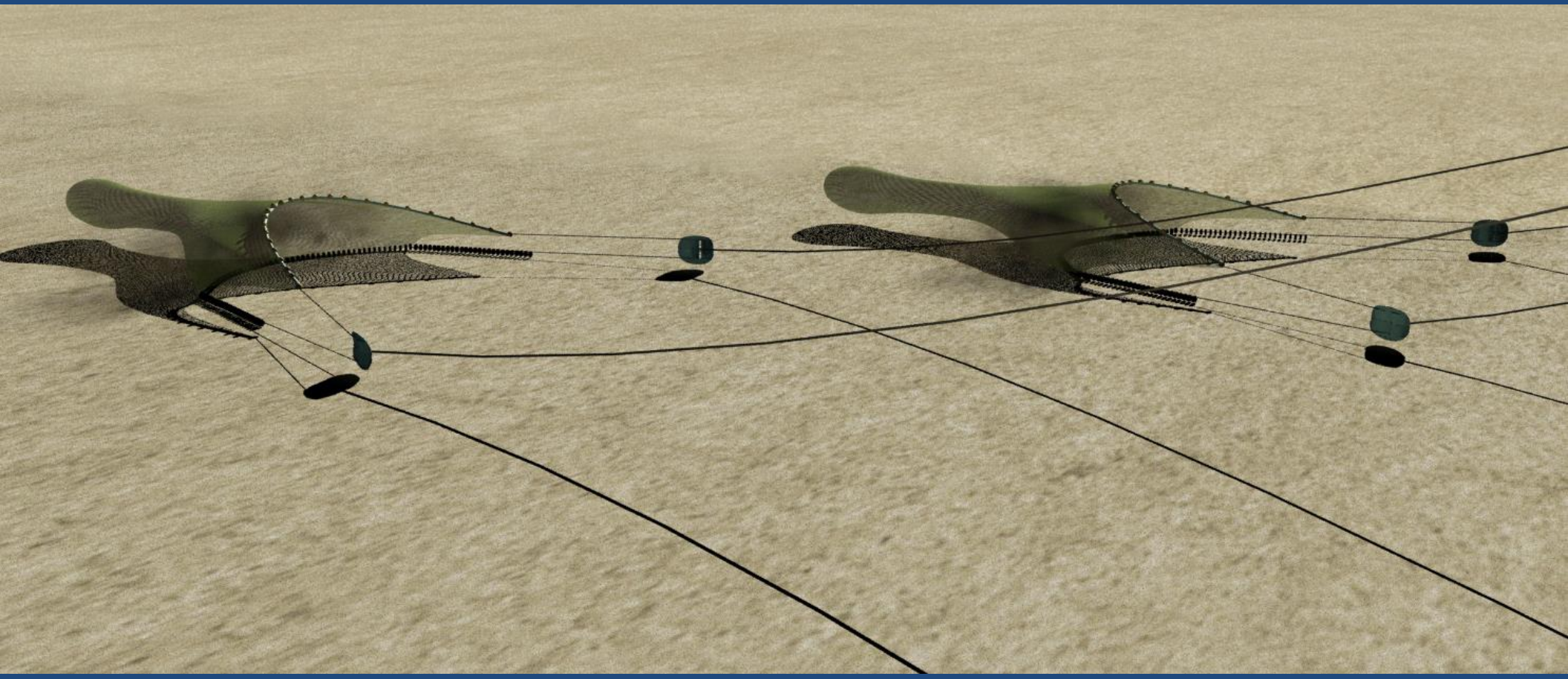
- In order to have more realistic presentation we added some special effects to the 3D graphics.

- You can see two screens simultaneous, i.e. make changes on the doors and see the effect on the trawl.



Selection of models and power of vessels

Constant adjustment to reach the greater efficiency



Diagnosis, system optimization options

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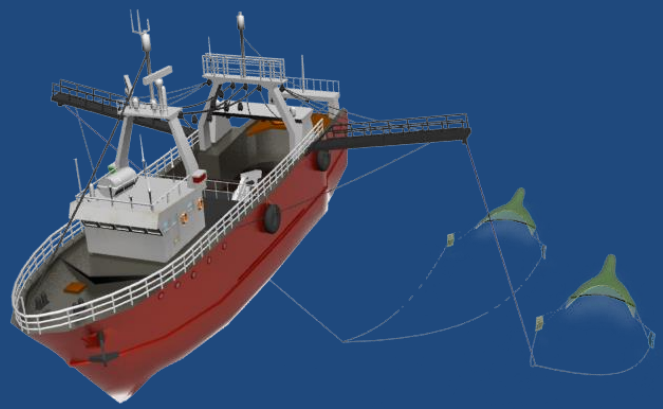
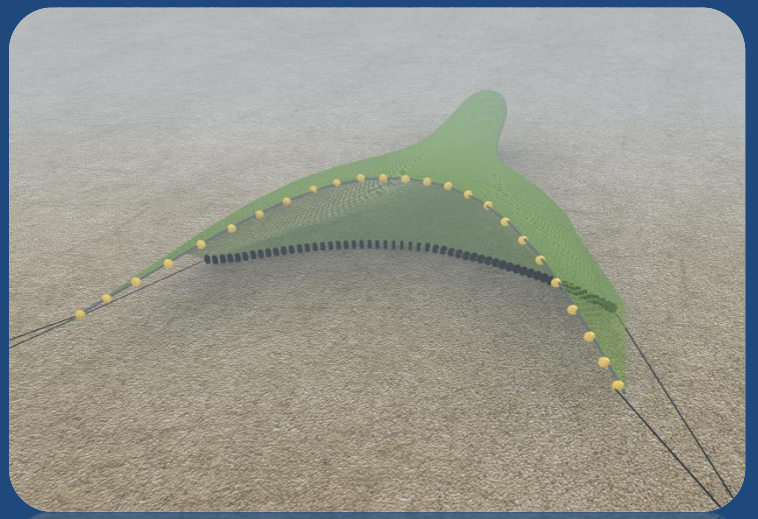
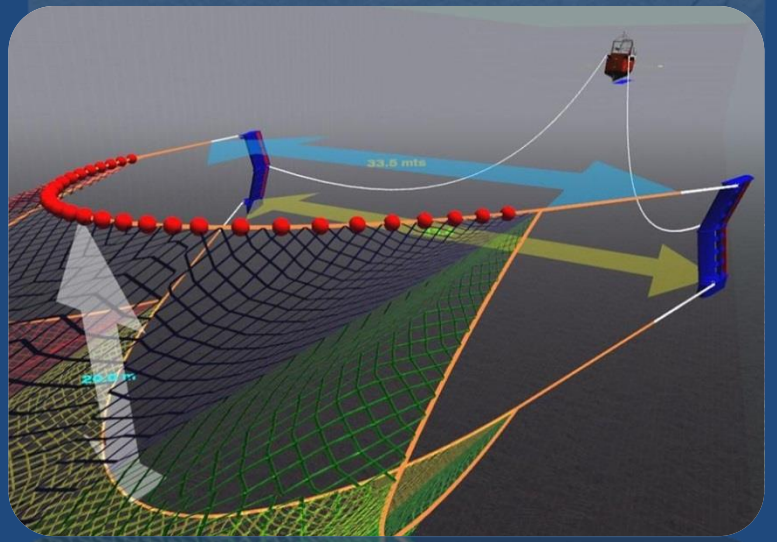
Simulation of the different fishing systems

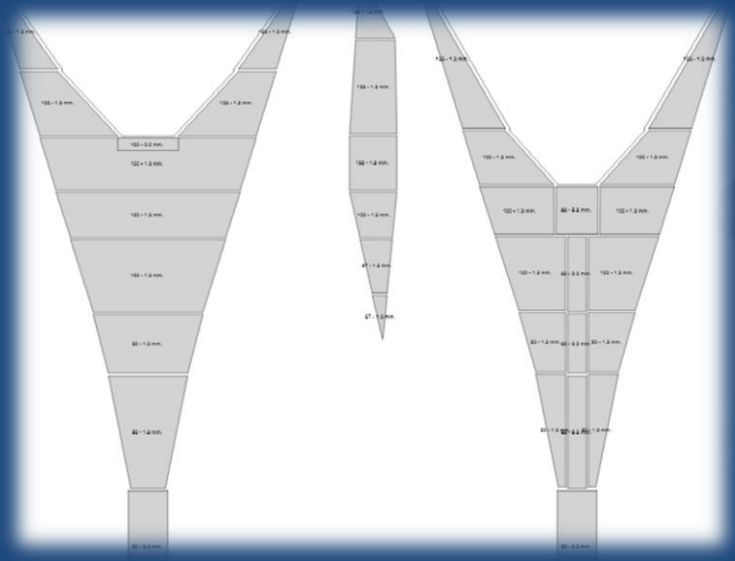


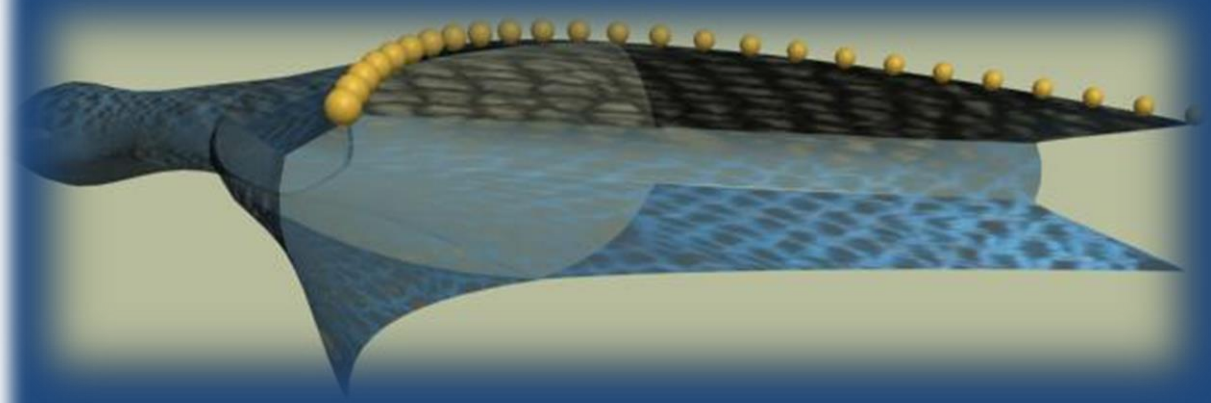




In order to perform and to anticipate net settings, the exclusive new "TRAWLVISION", copyright AcruxSoft SRL www.acruxsoft.com.uy , software brings new vision and knowledge to the user. He can adjust the net gear according to the "TRAWLVISION" recommendations and increase catch while reducing fuel consumption.

Trawl Vision Designer





TrawlVisionDesigner, is a tool for the net makers, students and skippers who want to design their own net models in an easy and firendly way. Once the net design is finished you can simulate it with the module TrawlVisionDesigner.

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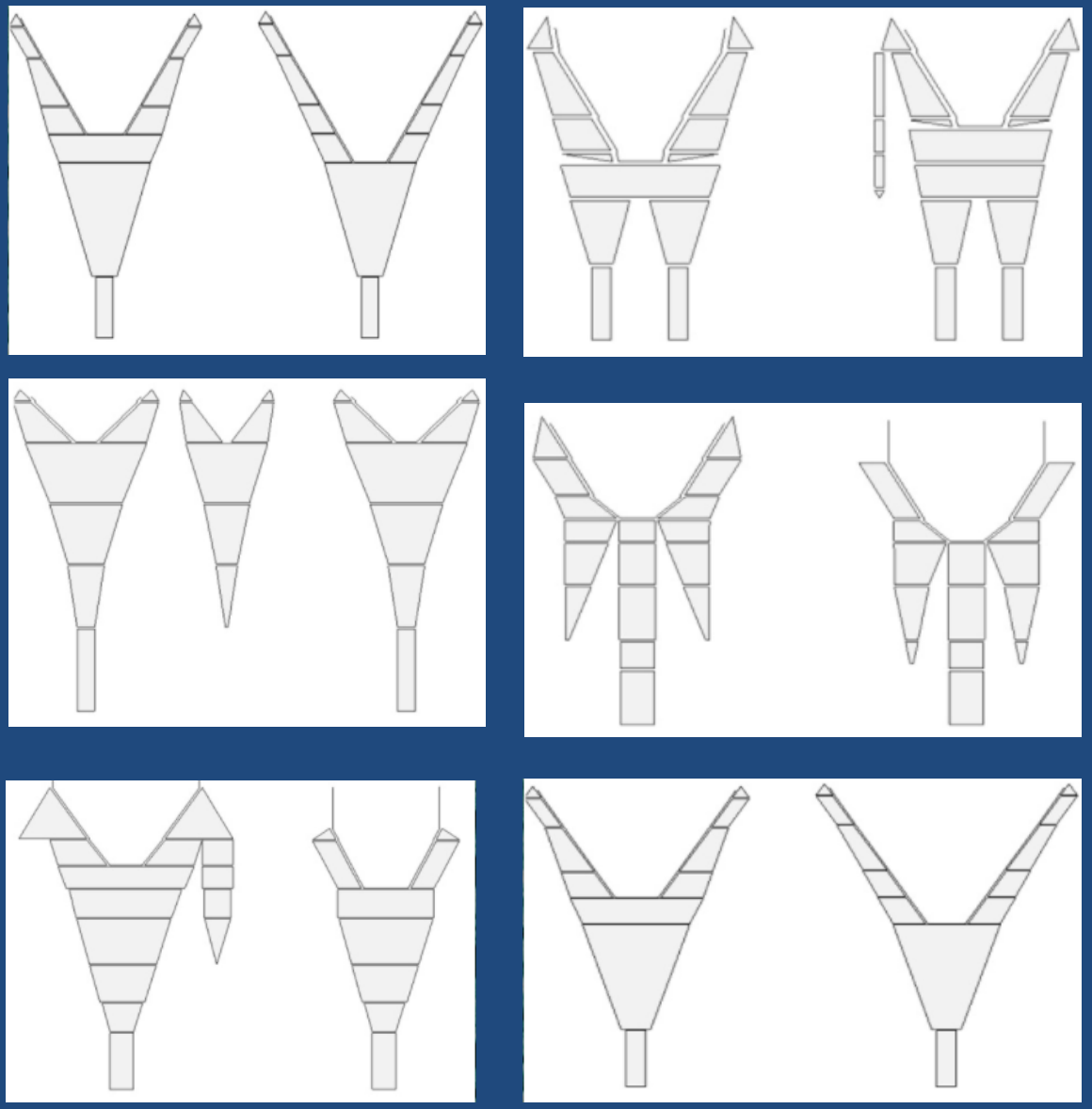
Model and visualize design properties

- Design the fishing nets, pelagic and bottom.
- Calculate the cuts, dimension, areas of the wires, angles of attack, types of mesh square and diamond, diameter of the wires and footropes.
- You can design up to 500 million combinations by simply using the mouse, displaying in real-time the quality of the design
- Evaluate the filtration and select U1 and U2.
- Allow to create your own prototype in an easy, quick and intuitive way.
- Get a library with over 300 net designs for different shoals.



Workshop on fishing technologies

Content:

The workshop will analyze in a dynamic and participative way the behavior of the gear.
Guided through three dimensional animations, we'll travel using virtual cameras focusing on each section of the fishing gear.
We'll make changes on the design of the nets, trawling doors, buoyancy, threads, angles, sweeplines, speed, warps to see how it affects resistance and consumption.

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Advantage in use the simulator

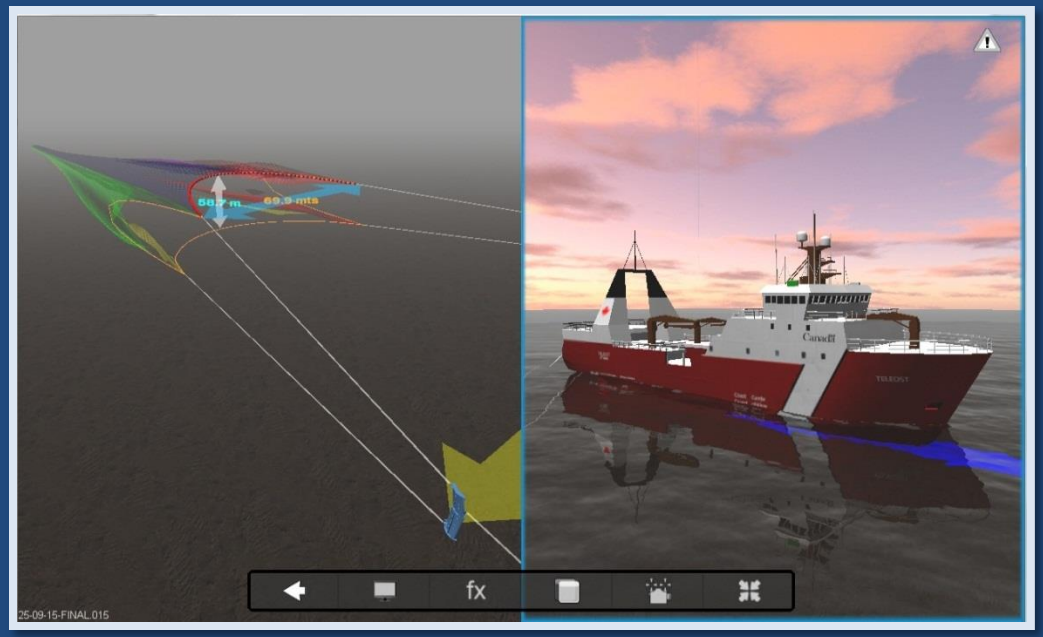
Enhance fisheries operations successfully and in the less time.

Increase successful fishing operation.

Best alternative as training tool for fisheries institutions

It will promote research and innovation.

Minimize the corrective actions.



Improve skills of skippers, crew members and practitioners.

Easy to use and can be adapted in short time.

Cost effective, cheap and reduce cost, time, fuel and labor force.

Support via Skype or custom installation by fisheries experts

Acknowledgment

2012 Award Gold Medal - International Exhibition of Inventions of Geneva . AcruxSoft SRL was awarded a gold medal at the International Exhibition of Inventions, Geneva, Switzerland, for their contributions in the field of Energy and Environmental.

2011 Global Forum - AcruxSoft is selected among the 50 TOP companies for its technological innovation and contribution to sustainable fisheries in INFODEV, held in Helsinki.

2010 Innovation ANII, the Ministry of Industry of Uruguay and the Uruguayan Chamber of Information Technology, reward AcruxSoft as the most innovative company in the country.

Record

The results are approved by over 20 countries, 800 ships, universities and research institutes:

- 2007 - Institute, Fisheries Maritime Polytechnic of Vigo – Spain - Fisheries Maritime Polytechnic of Ferrol - Spain, Fisheries Maritime Polytechnic of Ribeira
- 2010 The Labour University of Uruguay (UTU) – Uruguay, University of the Republic.
- 2012 Training school National Fishing Com. Luis Piedra Buena -Mar del Plata, Argentina.
- 2013 Council National Research – India
- 2013University of Comahue, Argentina
- 2013 Mexico - National Fisheries Institute of Mexico – SAGARPA - México
- 2014 Argentina - University National of Comahue -San Antonio Oeste / Río Negro
- 2014 Perú - Marine Institute of Peru – IMARPE
- 2015 Canada- Centre for Sustainable Aquatic Resources (CSAR) Fisheries and Marine Institute of Memorial University Canada
- 2016 Chile - Marine Institute – Fundación Almirante Carlos Condell
- 2017 Francia - Lycée de la Mer Paul Bousquet

We received support from the following institutions

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