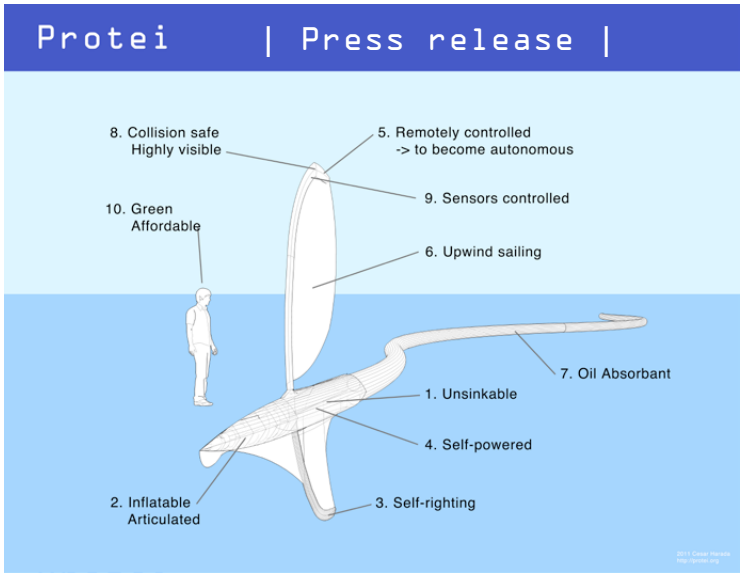

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Autonomous Sailing Robots to Clean Oil Spills

This summer, V2_, the Institute for the Unstable Media hosted an international team of designers and engineers for the development of Protei_006, the first full-scale version of the **autonomous sailing robot which will clean oil spills in oceans, amongst other applicatoins**. Protei_006 will be unveiled in September during the World Port Days at the team's workshop in Rotterdam and exhibited at V2_ as part of the World of Witte de With Festival. Before the Festival, all those interested in having a preview of Protei_006 are invited to the press conference.

Press Conference : 2 September, 17:00 - 19:00. Marconistraat 85, Delfshaven, Rotterdam
Cesar Harada, Protei Project Coordinator, will present the project, the technology and its future. Attendants will have the opportunity to address questions to Harada and the team as well as closely examine Protei_006 in the workshop where it was built.

World of Witte de With Festival, V2_ Eendrachtsstraat 10, 3012 XL Rotterdam, Netherlands
Friday 9 September, 17:00 - 23:00.
Saturday 10 September, 12:00 - 23:00.
Sunday 11 September, 12:00 - 18:00.
The harbour city of Rotterdam provides the perfect setting for developing, testing and presenting the Protei sailing drones. The Protei team and V2_ will present the full-scale model and the making of the prototypes as part of the World of Witte de With festival (www.festivalwww.nl).

What is Protei?

Protei is a fleet of autonomous sailing robots intended to clean oilspills at sea by towing a long, absorbent boom. The idea is is that since oil spilled at sea drifts downwind, the most efficient way of collecting it is to sail upwind. And since Protei are unmanned, no human health is at risk and they can be operated continuously, at low cost, even in rough weather far from the shore. They are hurricane-ready, self-righting, unbreakable, cheap and easy to manufacture for immediate deployment. Besides oil spills, many other applications are envisioned for Protei such as plastic debris collection in the oceans, radioactivity sensing, physical oceanography and much more. All components and designs are open source: meaning that Protei can be developped, reproduced and modified by anyone, for free.

Why Protei?

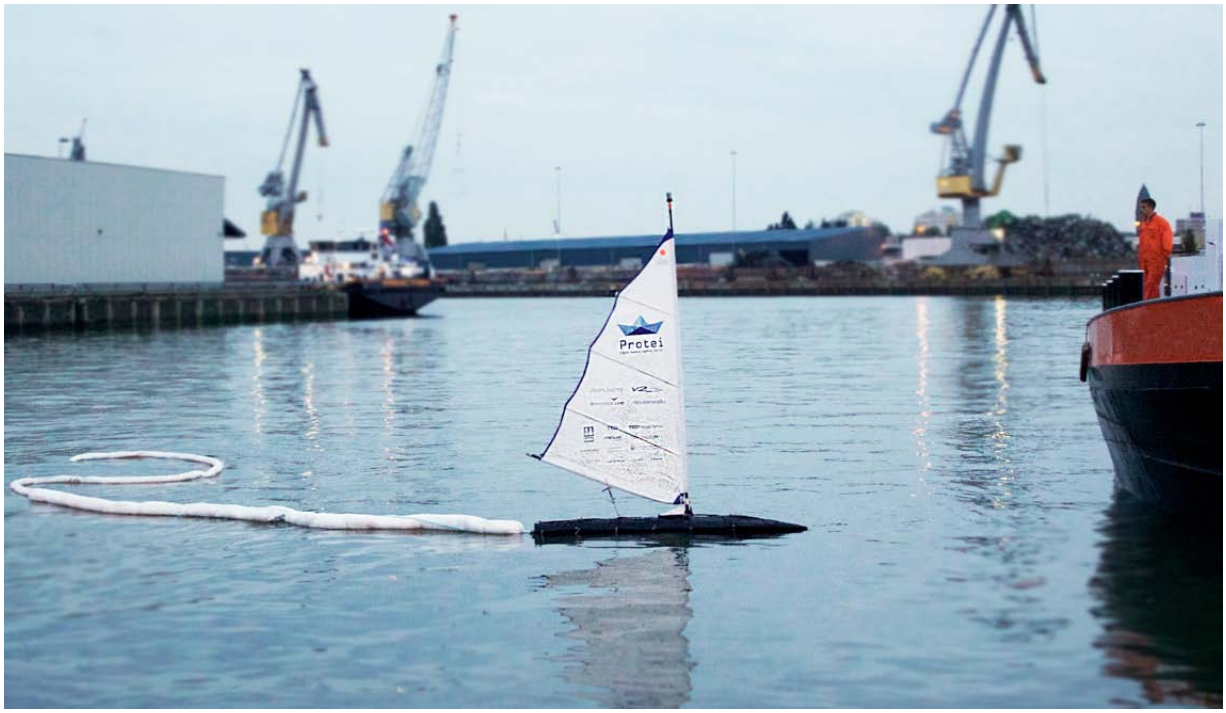
Human societies are increasingly threatening the environment and themselves, so much so that it has become necessary to develop and test environmental monitoring and cleaning technologies that do not at the same time endanger human health. Protei does this by working remotely, using forces of nature to gather energy and locomote while collecting or monitoring hazardous pollutants, in this case oil. But, this is only the initial and immediate application. As an open project, there will be other applications of this articulated, automous sail boat. All are invited to contribute.

The Protei Community

In April 2010, the explosion on BP's oil platform 'Deepwater Horizon' caused the oil spill in the Gulf of Mexico, the most devastating environmental event in the history of the United States. Cesar Harada, at the time a MIT project leader, left Boston to move to New Orleans envisioning Protei, a fleet of oil collecting sailing drones.

Though, the issue is too big for Harada alone to solve, so he started sharing his idea publicly and through social media platforms. Hundreds of people donated money through kickstarter.com and soon a community of organisations and people from all over the world started working together to make Protei a reality. Protei prototypes are now regularly tested at the Kaag Watersport Academy on Kaag Island.

This summer, the success of Protei in the gigantic port of Rotterdam could lead to the spawning of many other Protei projects around the world.



For visual material:

A selection of Protei pictures
www.media.protei.org
www.flickr.com/groups/protei/
>> All free of rights, simply credit «protei.org»

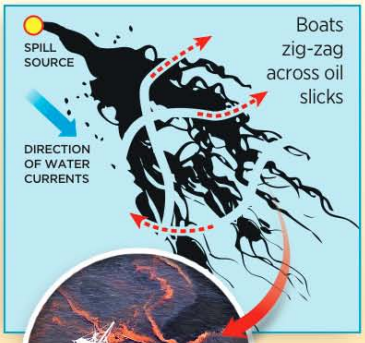
References:

www.v2.nl
www.protei.org
www.hofmanenzonen.nl
www.dekaag.nl

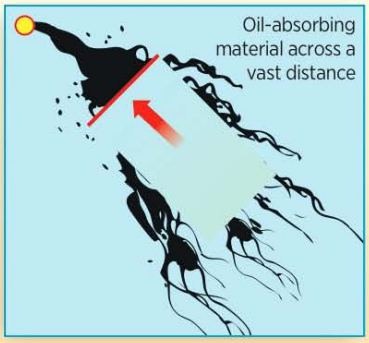
Robotic ships to the rescue

Nearly one year after the Deepwater Horizon disaster — in which cleanup technologies could only collect 3% of the spill — the environmental organization **Open Sailing has developed an automated fleet of drones called Protei** that promises better results at lower cost. Moreover, its open-hardware policy means anyone is welcome to modify, produce, and distribute the design.

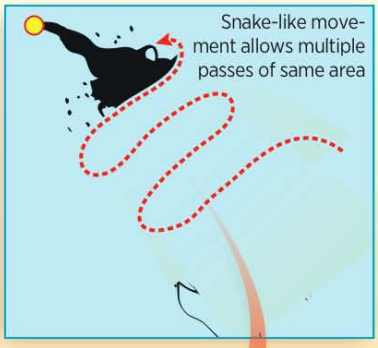
CURRENT SOLUTION

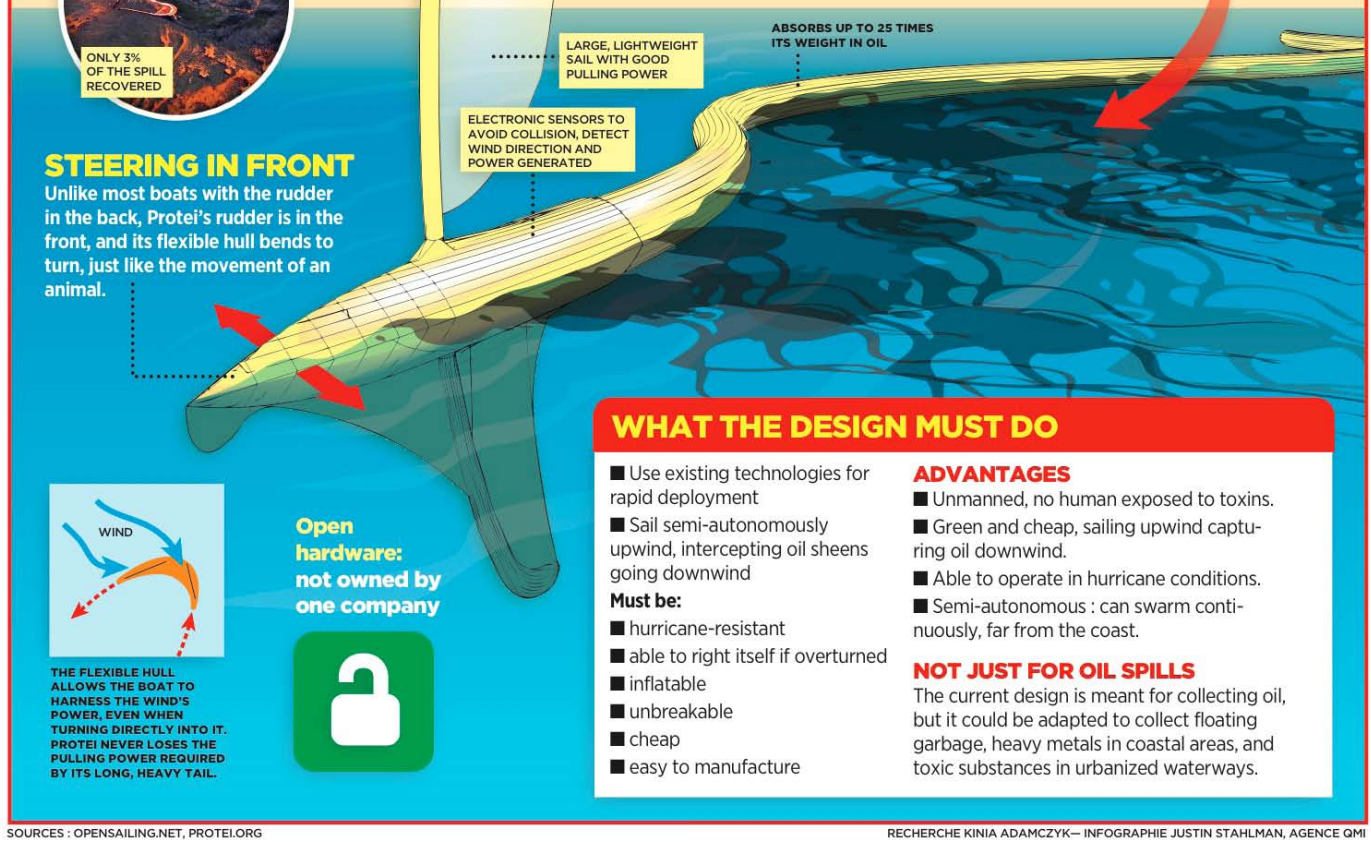


IDEAL SOLUTION



PROTEI





STEERING IN FRONT

Unlike most boats with the rudder in the back, Protei's rudder is in the front, and its flexible hull bends to turn, just like the movement of an animal.

THE FLEXIBLE HULL ALLOWS THE BOAT TO HARNESS THE WIND'S POWER, EVEN WHEN TURNING DIRECTLY INTO IT. PROTEI NEVER LOSES THE PULLING POWER REQUIRED BY ITS LONG, HEAVY TAIL.

Open hardware: not owned by one company

WHAT THE DESIGN MUST DO

- Use existing technologies for rapid deployment
- Sail semi-autonomously upwind, intercepting oil sheens going downwind

Must be:

- hurricane-resistant
- able to right itself if overturned
- inflatable
- unbreakable
- cheap
- easy to manufacture

ADVANTAGES

- Unmanned, no human exposed to toxins.
- Green and cheap, sailing upwind capturing oil downwind.
- Able to operate in hurricane conditions.
- Semi-autonomous : can swarm continuously, far from the coast.

NOT JUST FOR OIL SPILLS

The current design is meant for collecting oil, but it could be adapted to collect floating garbage, heavy metals in coastal areas, and toxic substances in urbanized waterways.

SOURCES : OPENSAILING.NET, PROTEI.ORG

RECHERCHE KINIA ADAMCZYK— INFOGRAPHIE JUSTIN STAHLMAN, AGENCE QMI

Protei
Open Source Sailing Drone

v2_ institute for the unstable media

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