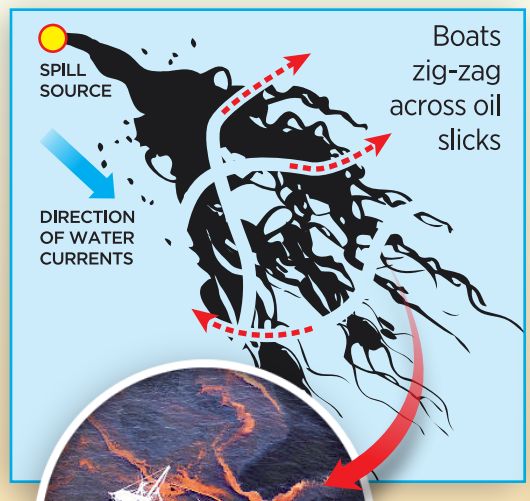
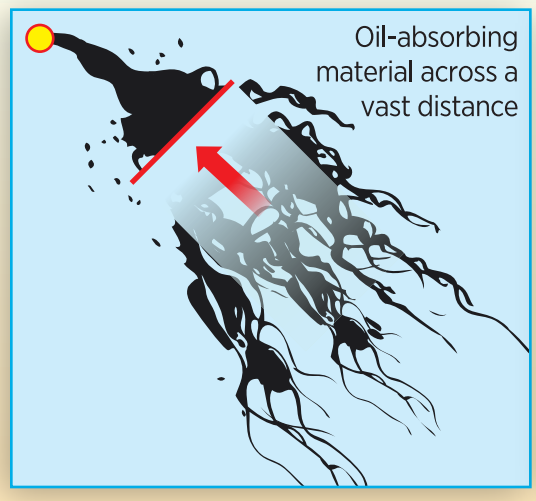
Robotic ships to the rescue

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.

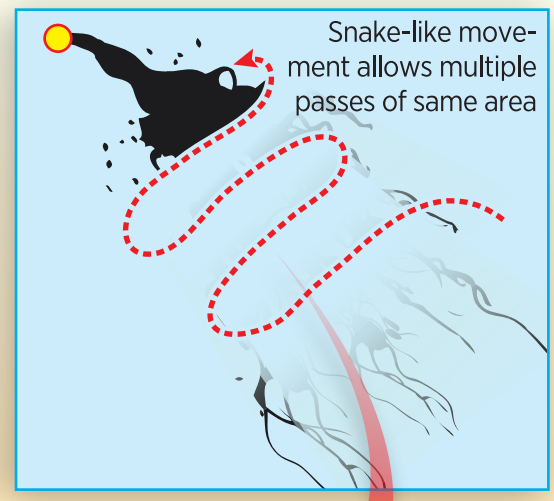
CURRENT SOLUTION

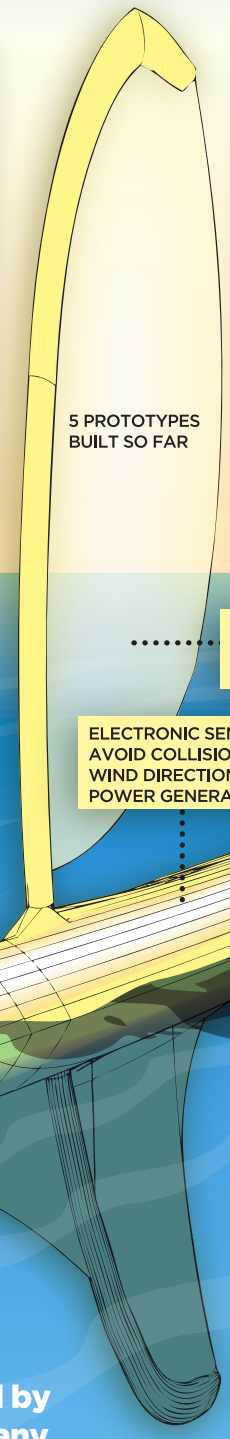


IDEAL SOLUTION



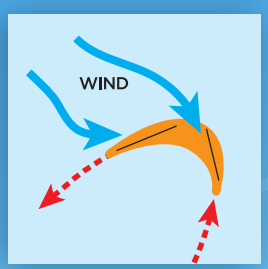
PROTEI





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

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