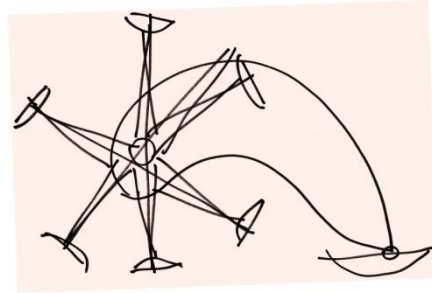


Antarctic Biennale 2017

Glaciator

The walking antivirus

By Joaquín Fargas



Abstract

Recent studies show that the melting of ice caused by global warming could do more than raising the sea level: it could wake up frozen viruses.

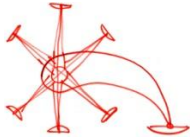
Since 2003, large viruses have been found ensconced in permafrost, a layer of soil in the Arctic that is usually permanently frozen. Rising temperatures and melting ice could see the reappearance of ancient deadly viruses. It looks like all kinds of infection-causing viruses could defrost as the world warms.

Glaciator works as an antivirus that compress the snow as it steps on it. Glaciator is a “Firn-Maker”, firn is an intermediate state between snow and glacier ice. This process contributes to accelerate the formation of the glacier. In addition, Glaciator is a virus free robot: its computer system is protected itself by a strong antivirus.

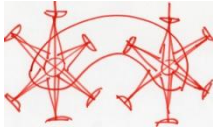
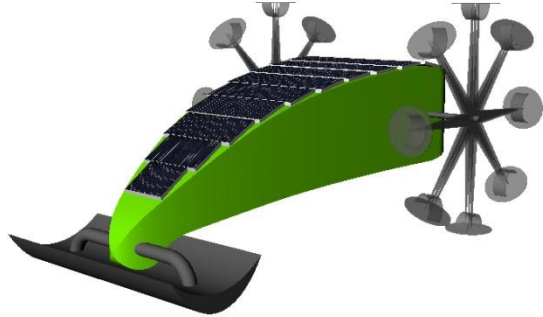
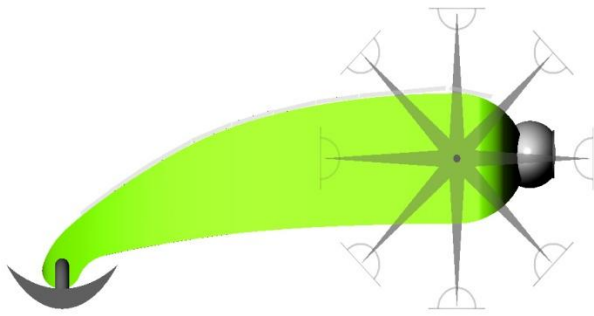
Art proposal

Glaciator is an installation composed by one to four solar robots that help to compress and crystallize the snow, this process turns snow into ice that is fixed to the glacier mass. The mission of these robots is to help to accelerate the ice formation process on glaciers, allowing them to grow with the addition of snow, regaining the mass they lost as a result of the melting of ice.

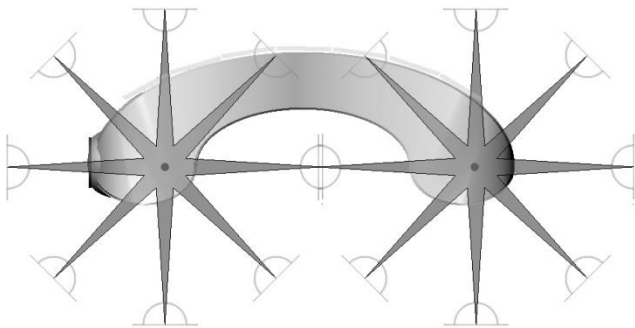
Its final mission is to raise awareness about the climate change, the melting of the ices and its consequences on the planet.



Robot Proposal I



Robot Proposal II



Technical Description

The robots rover the surface of the glaciers powered by solar cells and controlled by GPS.

Technical data

- Dimensions: Height 0.60m, length 1.20m, width 0.60m
- Main body: High density Styrofoam
- Upper cover: 20watt solar panels
- Wheels: Clear acrylic (Plexiglas)
- Gear motors (1 per wheel): 12v 2watt
- Mini pc Windows 10
- Arduino board
- GPS
- Front Camera
- Wireless connection

Previous work in Antarctica

A previous experience in The White Continent led to wonder how art could have a place in such a distant location, and how art itself is a mean to talk about all the dangers and difficulties that take place in that region, and thus in the planet.

The art field poses alternative solutions to environmental issues that may become an inspiration to the scientific field. The artistic thinking has no boundaries. The utopian works represent solution proposals that as crazy and unusual as they may seem to be, they could work as an inspiration to the scientific world to generate real solutions by "thinking outside the box". Many of these ideas may be seen as science fiction today, but they may become a reality in the future.

Two pieces have been done in 2011:

Extinction – Creation



40 million years ago Antarctica was a warm continent and habitat for many animal and plant species. The drastic cooling provoked a process of mass extinction. The sun it's the only thing that kept almost the same and connects that past of millions of years ago with the present.

Solar flowers and insects represent the turning point between the Antarctic past with its fossils and the future; where the man with his technological capacity has begun to develop the mystery of life and could be the start of the recreation of species already extinct or the creation of new ones.

Don Quixote against climate change



A group of wind mills installed in Antarctica generate cold to maintain the glaciers and poles, avoiding the thaw. It is a metaphor of the character from *Don Quixote de la Mancha*, the Cervantes' book, who tries to fight against the windmills in a sort of impossible task.