

Symbiotic Machines Workshop - Kick off SymSE project, 21 September 2016, ESTEC

Agata Kolodziejczyk, ACT

Brief Report



Agenda of the meeting

10.00

Presentations: Raoul, Ivan, Evelina

Presentation: Bernard (support from ILEWG/VU/ ESTEC),

Presentations: ESTEC colleagues (Agata Kolodziejczyk, ACT)

Presentations: other ESTEC guests (Angeliki Kapaglou, Stanford)

12.00-13.00 discussion

13.00 lunch

14.00 follow-up discussion

(symbiotic biosphere)

Still it is hard to define, what the Science Art means, but many interesting topics considering environmental robotics/machines development have emerged during the interactive presentations of both artists and scientists. The most interesting presentation was about symbiotic, autonomous machine working on photosynthetic solar cells searching and transforming algae. The machine was built and presented in Amsterdam. It is completely transparent to get more light inside. It was created notxhfgkdgh to serve but to be...just to be.

(details: <https://ivanhenriques.com/2014/03/02/symbiotic-machine/>).

Environmental robotics/machines are developed in FLINT- Center for Fundamental Living Technology (more info: <http://flint.sdu.dk/>), where parallel boost of technology and science is required at the same time. "Machines are already a part of our society" "Problem is not technological evolution, but who is designing them".

Why hexagons are so important and widespread in nature? Because they optimize the space - zeglaz portugalski shape. Microbial fuel cells, katody I anody connected, brushes in the water....bacteria. Plandts are also there, filtering the water. Again robot is for itself. When no more electricity=no more food = bacteria should search for food.

Aerobiome - ion traps for atmospheric observation, Synergetical Lab Evelina Domnitch, Dmitry Gelfand

Quantum Lattice: RySQ collaboration

Air is one organ that we share with other organisms....one of the most beautiful artworks on Earth: bubbles, droplets, clouds, electromagnetic field, EM propagation, 1984 power trap of the air particles, 2 electrodes and ring is electrode, high-voltage. Ring is negative, particles also have to be charged, at least a bit, they can stay for hours there. 2 cm ring electrode.

Luminiferous drift, an orbital view of a bioluminescent primordial ocean. Rotating tank, inside the model of Saturn, very dynamic stationary hexagonal pattern just by switching of one rotating ring. Algae from space EVVISAT - phytoplanktor. Trace water currents, bioluminescent algae.

Lipid droplet and horseradish peroxide enzyme injected inside to imitate life

Bioluminescent protocells - investigation required.

Organic bros on top of the rotating container: nice imitation of atmospheric dynamics.

SPHAERAE by cocky EEK

Inflatable architecture, foaming acids, soap bubbles, rotobimorphic architecture,

Spherical laser projection via micron-thin surface waves, 10000 peacock heathers in foaming acid, 2006

Gramm Stevens, inflatable structure 20 min in desert because of sun and heated up air
synergeticalab.com