

Fachhochschule
Nordwestschweiz

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HONF, House of Natural Fiber, Yogyakarta

Gabor Csucs, Martin Willeke, Marcus Textor, ETH Zürich

Förderungen durch: Migros Kulturprozent, BAK, Stadt Zürich, FHNW

Teaching

I hear and I forget
I see and I remember
I do and I understand

Confucius



Fields of Activity

dusjagr labs – transdisciplinary Scholar and Artist

<http://www.dusseiller.ch/labs/>

- SGMK | MechArtLab, diy* festival
 - <http://www.mechatronicart.ch/>
- Hackteria | Open Source Biological Art
 - <http://hackteria.org>
- PlayAround 2010 - Taipei | DIWO Culture
 - <http://2010.playaround.cc>
- Dock18 | Raum für Medienkultur
 - <http://www.dock18.ch/>
- FHNW, HLS | wetPONG - Hybrid Games, Micro- and Nanotechnology and Life Sciences
 - <http://wetpong.net>
- ZHdK | SlowGames
- ETH Zürich | Traditional Materials

Teaching what...

The image shows the cover of the ETH MatBlatt magazine. At the top left is the ETH logo with the tagline 'Empire of the future for technology, science and innovation'. The main title 'MatBlatt' is prominently displayed in the upper right. The cover features a photograph of Dr. Marc Dörmlich, a man with glasses and a striped shirt, sitting on a lawn. He is holding a small object in his hands and has a thoughtful expression. In the background, there is a large tree stump and a wooden sculpture of a face. The text on the cover includes 'Interview' and the headline '«Kreativität ist wichtiger als Wissen.»'. Below the headline, there is a section titled 'Inhalt' with a sub-section '1 Interview'. A small text block at the bottom right provides details about the interviewee, Dr. Marc Dörmlich, and his research in materials science.

ETH
Empire of the future for technology, science and innovation

MatBlatt

3 | 09

Interview
«Kreativität ist wichtiger als Wissen.»

Inhalt

1 Interview

Dr. Marc Dörmlich, Studium Materialingenieur am Departement Materialwissenschaft mit anschließendem Dokortitel bei Prof. Dörmlich, über sich, seine Arbeit und seine Lehrtätigkeit als Dozent im Politikum I und II, wie er sich mit Studierenden im Bachelorstudium Materialwissenschaft sowie mit hochschulübergreifenden Projekten auseinandersetzt.

How can I teach creativity? Is there an intuitive understanding of Nanosystems? Whats the benefit of transdisciplinary projects? How can scientists learn to talk?

A faint, light-colored graphic of a hand holding a pencil is visible in the background, centered behind the text. The hand is positioned as if writing, with the pencil tip pointing towards the bottom right.

On Teaching to Kids, Geeks and Artists

Workshops for Artists, Kids and Geeks



SMAS Swiss Mechatronic Art Society

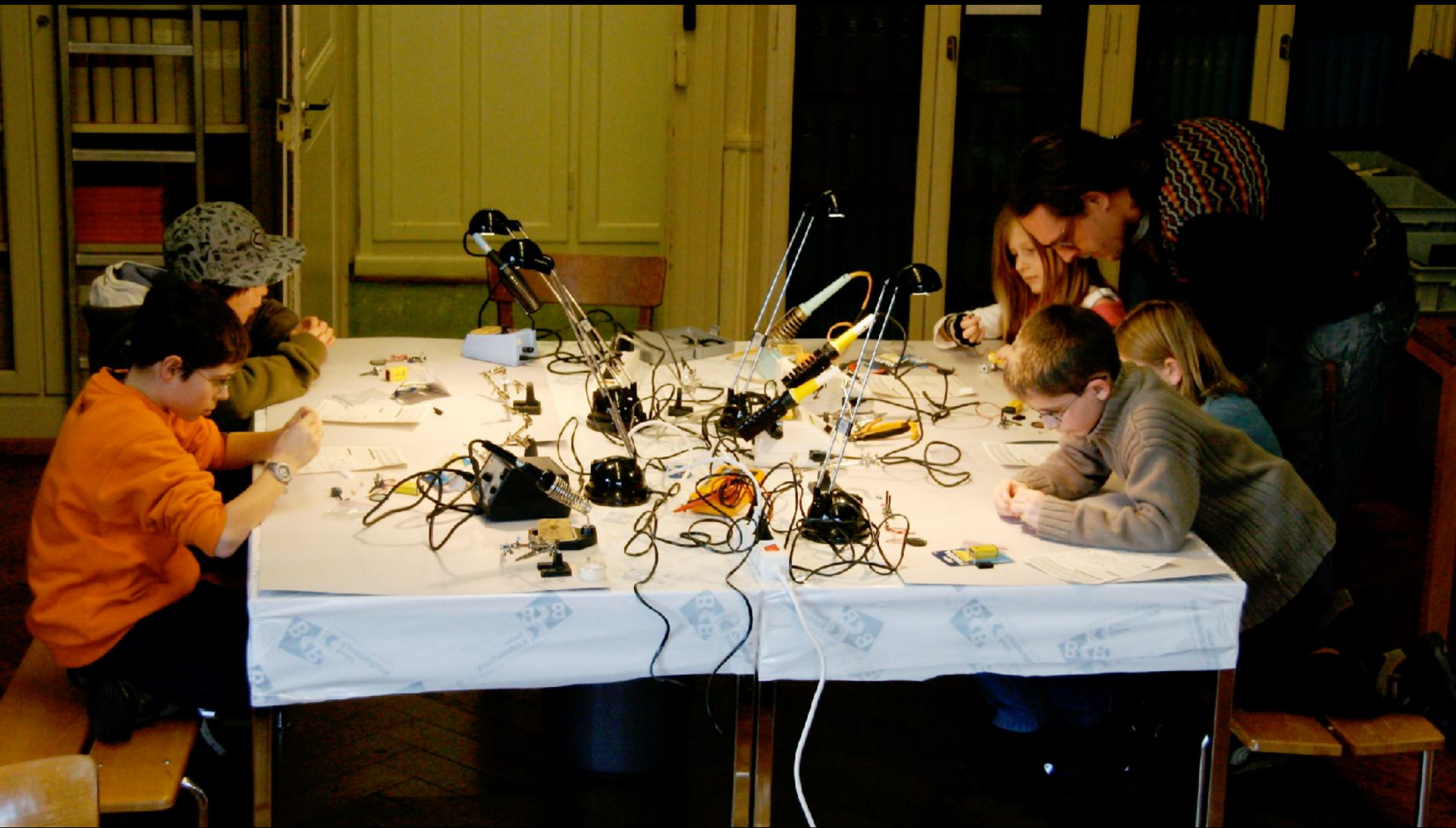
SSAM Société Suisse d'Art Mécatronique

SGMK Schweizerische Gesellschaft für Mechatronische Kunst

www.mechatronicart.ch

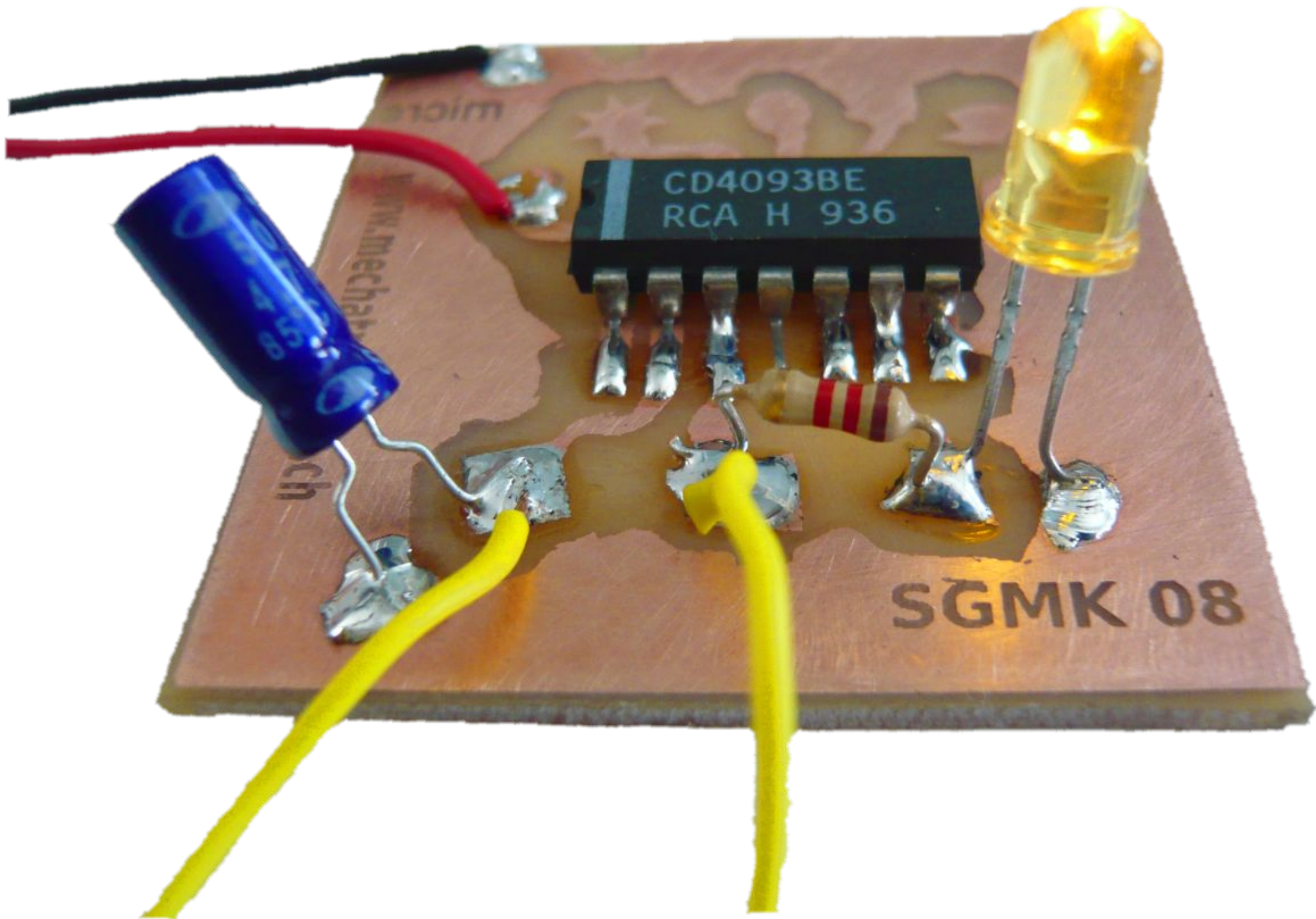






MechArtLab





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RCA H 936

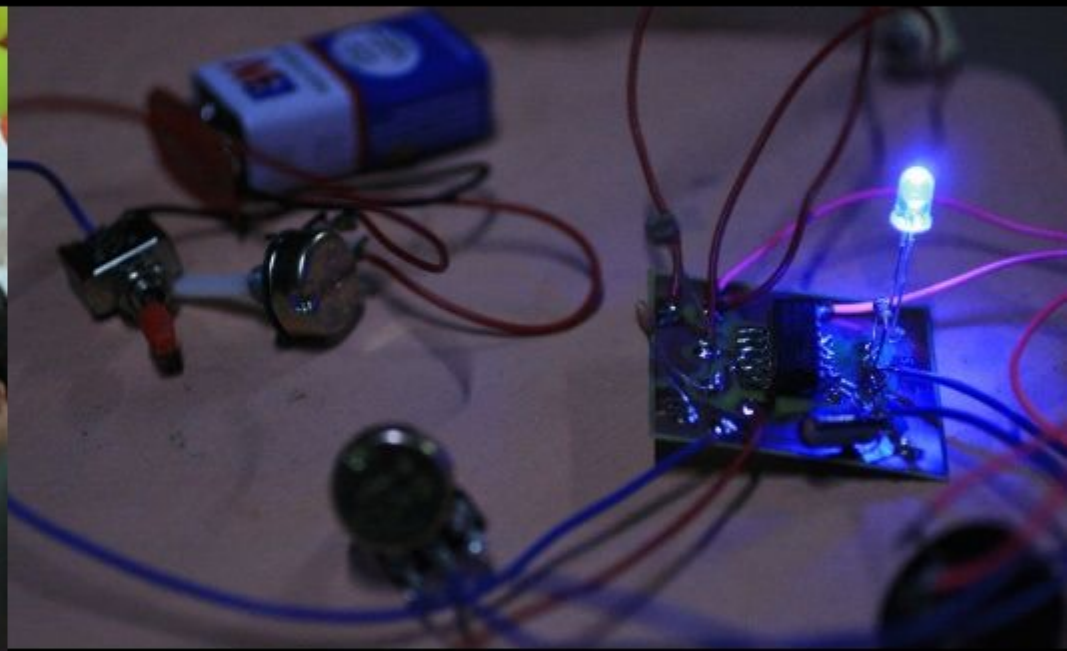
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SGMK 08

diy makeaway



Krachmacher bauen mit der Schweizerischen Gesellschaft für Mechatronische Kunst



diy डीआई आर्य



Krachmacher bauen mit der Schweizerischen Gesellschaft für Mechatronische Kunst



What is Open Source Biological Art?



HACKTERIA.ORG

Open Source Biological Art

Collaborators

Marc Dusseiller (Switzerland)

Yashas Shetty (CEMA, Bangalore)

Andy Gracie (Spain)

and more....

<http://hackteria.org>

hackteria is a community based platform and information portal for the open sharing of knowledge, instructions, critical reflections and theoretical articles about open source art project dealing with biology | lifescience | biotechnology



Background: Interactivos?'09





HACKTERIA.ORG

Open Source Biological Art

Marc Dusseiller

Scientist / Lecturer / Artist

BioInterfaces (ETH)
Micro/Nanotechnology (FHNW)
Tissue engineering

Cultural facilitator (dock18, diy*)
DIY electronics (SGMK)
Experimental music

www.dusseiller.ch/labs
www.mechatronicart.ch

Yashas Shetty

Artist / Scholar / Musician

Media Art (CEMA)
Art|Sci (NCBS)

Programmer
Data sonification
Tissue engineering
Synthetic biology
Experimental music

www.thedepartment.in
www.cema.srishti.edu.in

Andy Gracie

Artist

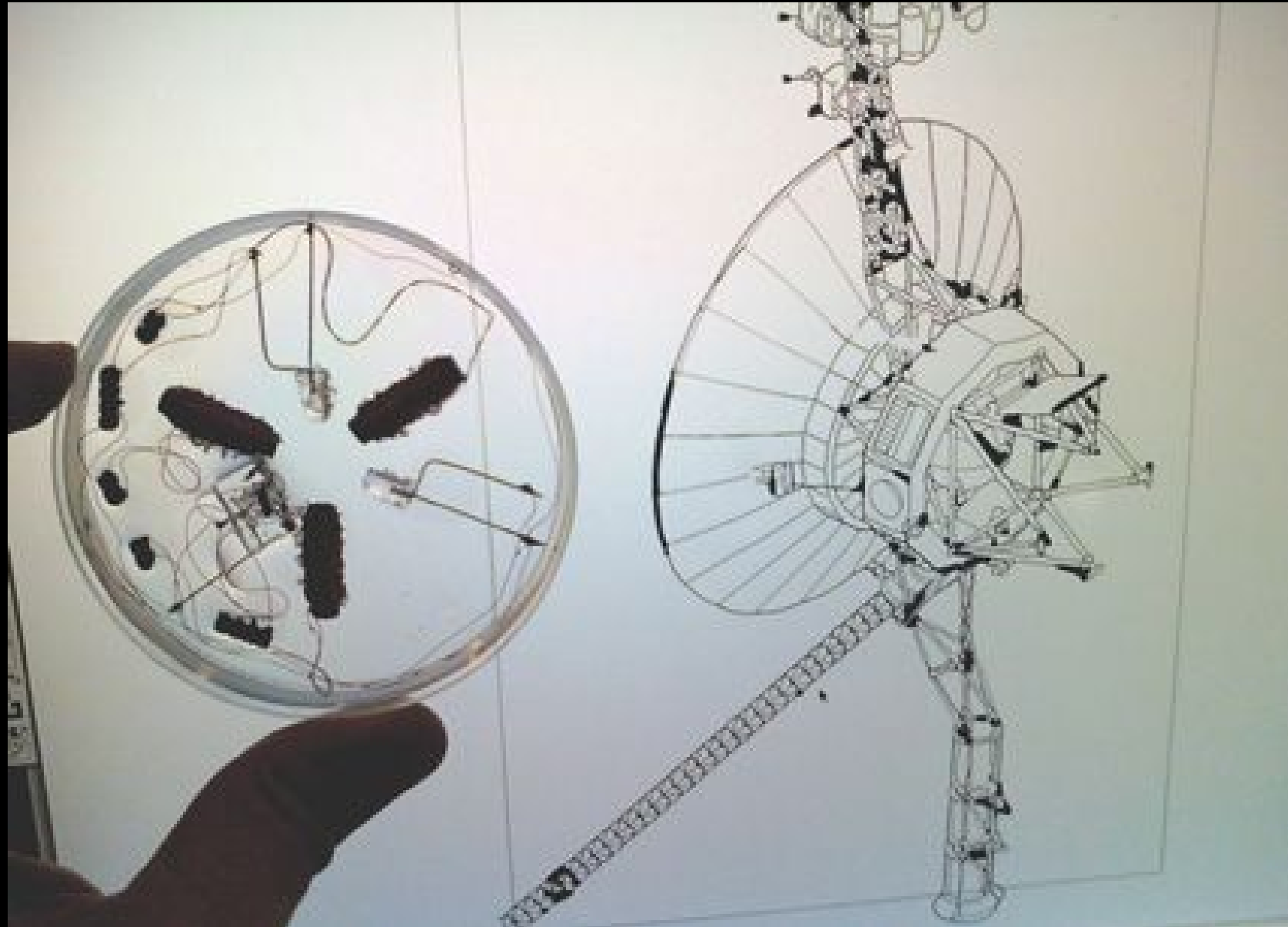
Art|Sci

Installations
Robotics
Biology
Artificial life
Hybrid symbiosis

www.hostprods.net

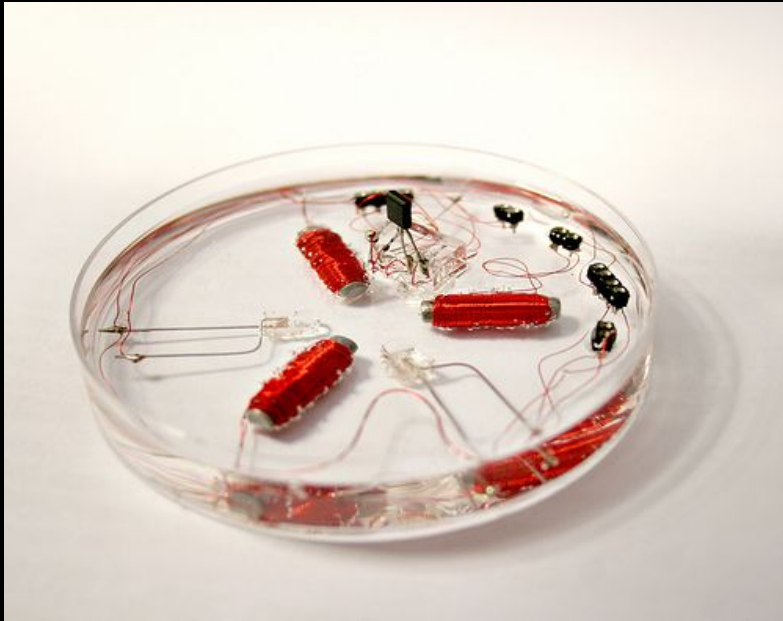
Deep Data Prototype

Andy Gracie et al



Experiments in Bioelectronix

Andy Gracie, Marc Dusseiller et al



What is a hack?

Originally:

„A quick job that produces what is needed, but not well.“

1950s:

Amateur radio enthusiasts defined the term hacking as creatively tinkering to improve performance.

Today:

"A clever solution to a problem."

„An appropriate application of ingenuity.“

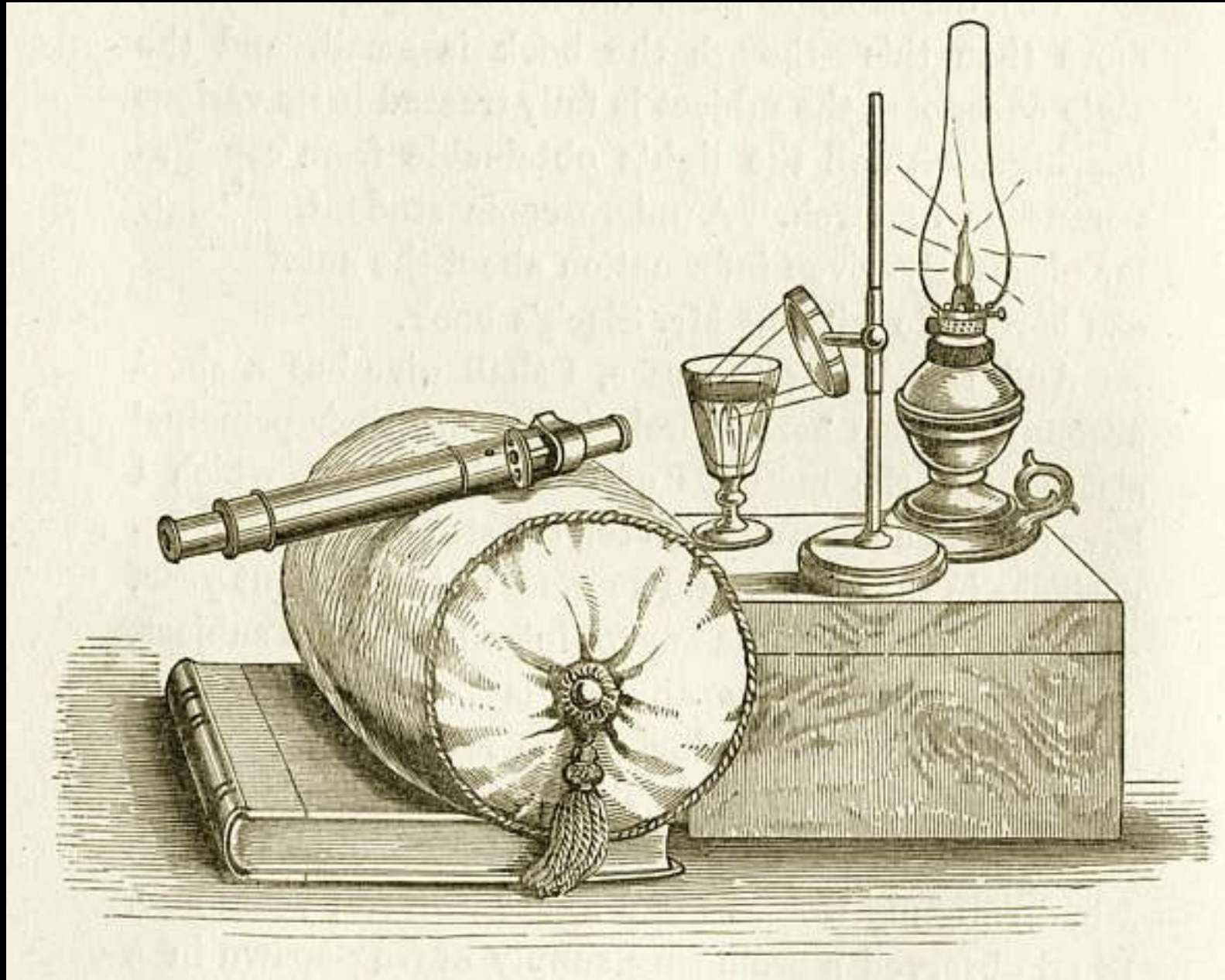
Hacker's Jargon

DIY Microscopy – hacked Webcam

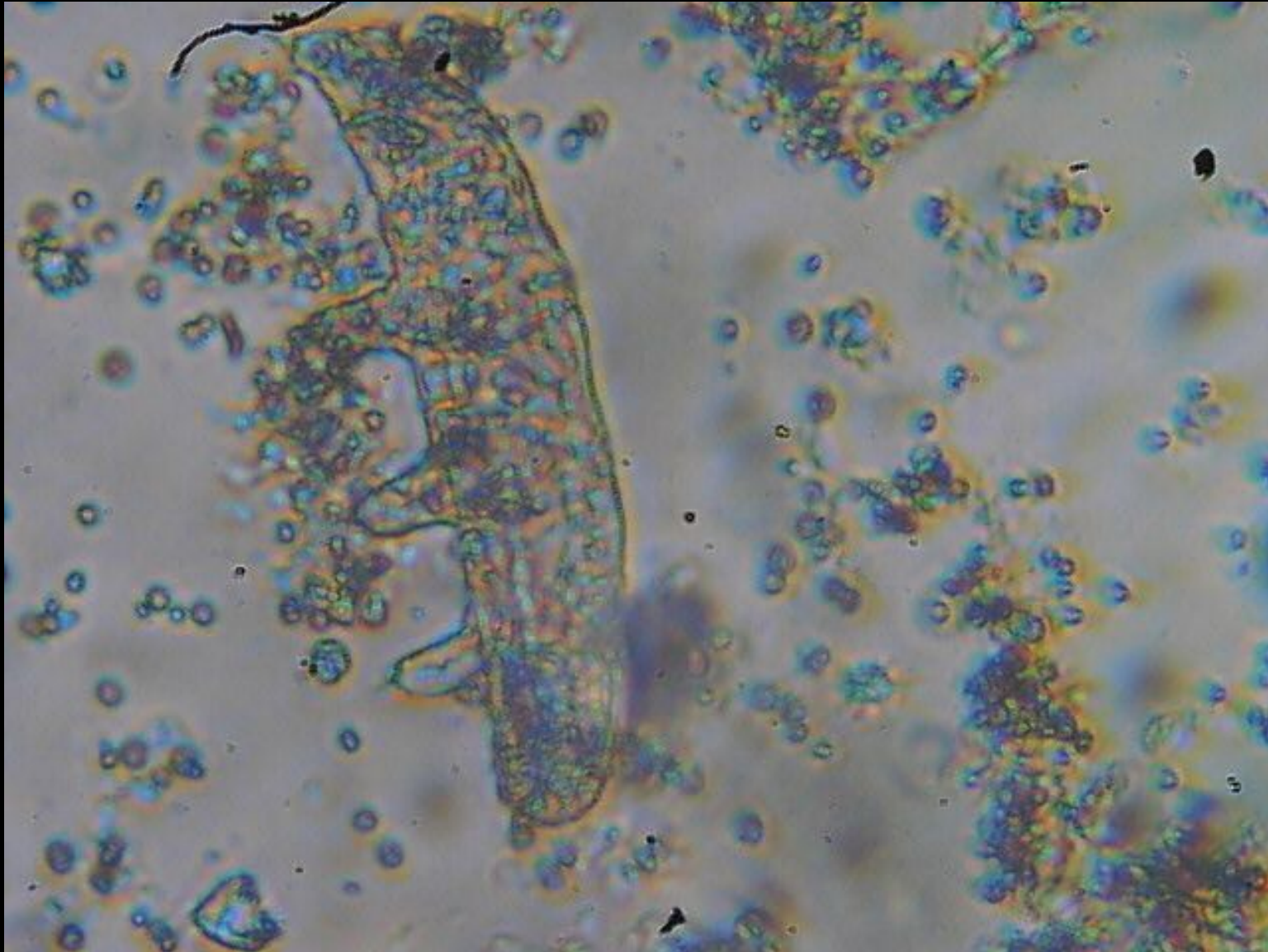


Repositioning of the lens turns a cheap webcam into a microscope

Microscopy – Victorian Scientist



Observations...



Waterbear, *Tardigrada*, sadly its dead...

House of Natural Fiber – Yogyakarta

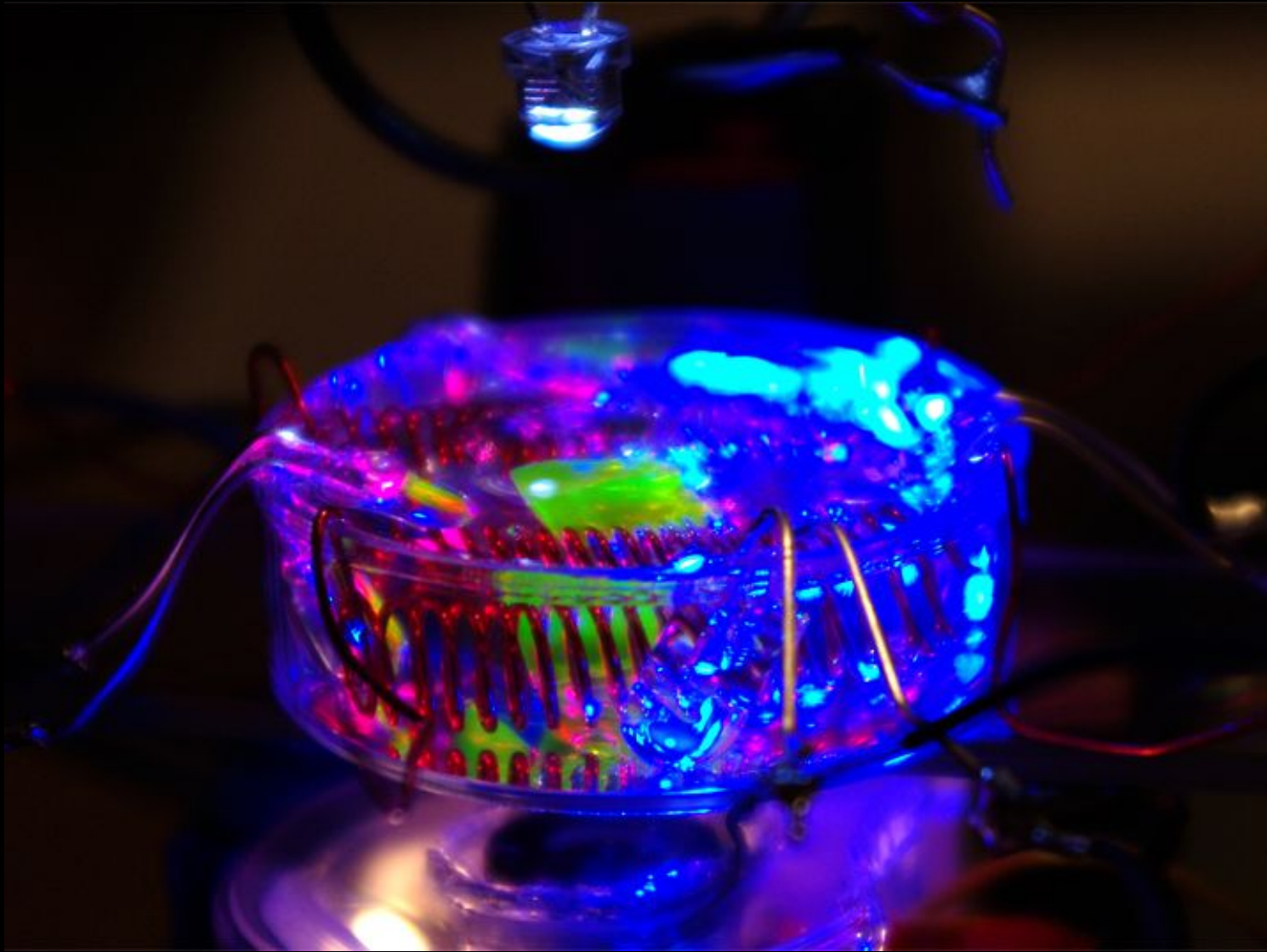


Haemocytometer – PS3 Eye Hacks



Collaboration with House of Natural Fiber and UGM, Yogyakarta

Bioelectronics for Artists



Workshop with Andy Gracie

Getting on Plant's Nerves...



Workshop with Špela Petrič and Andrej Meglič

CEMA – Bangalore

Srishti School for Art, Design and Technology



International Genetically Engineered Art Competition

Hackteria & CEMA @ IGEM



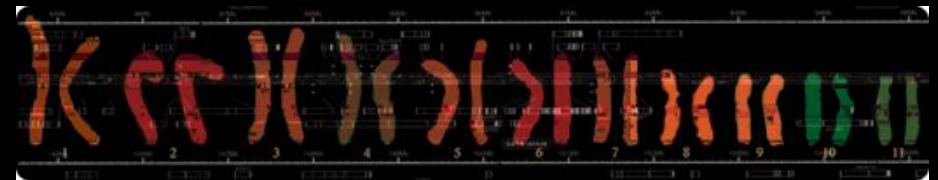
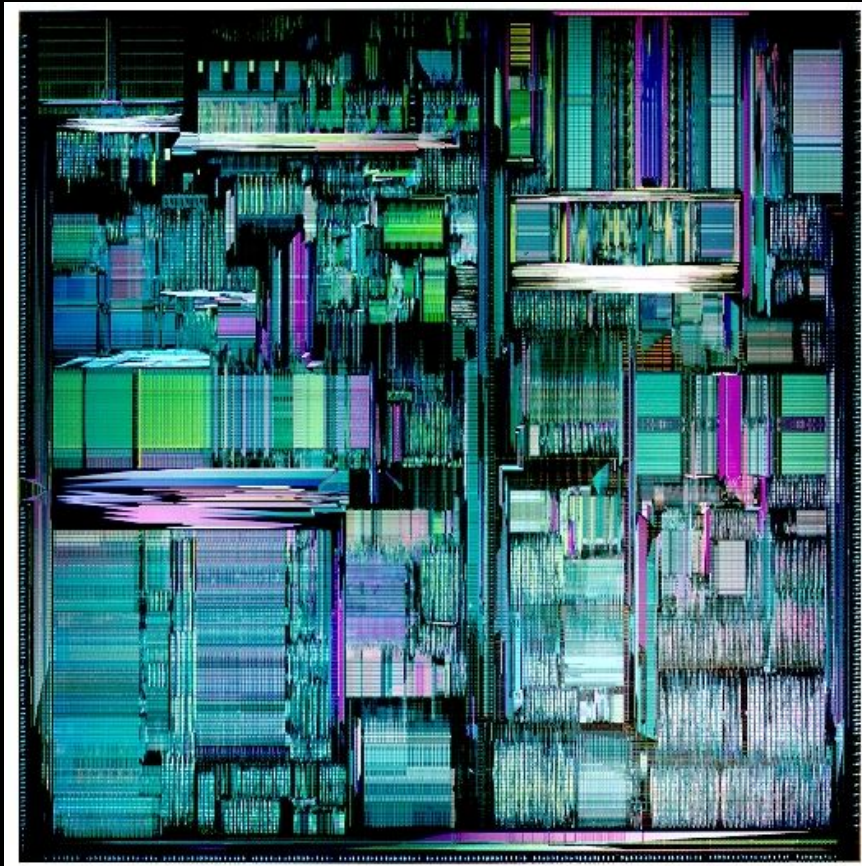
International Genetically Engineered Machines Competition

Yashas Shetty, CEMA – Bangalore

Why should artists/designers/outsideers get involved with Synth-Bio(in particular) and Sci-Tech(in General)

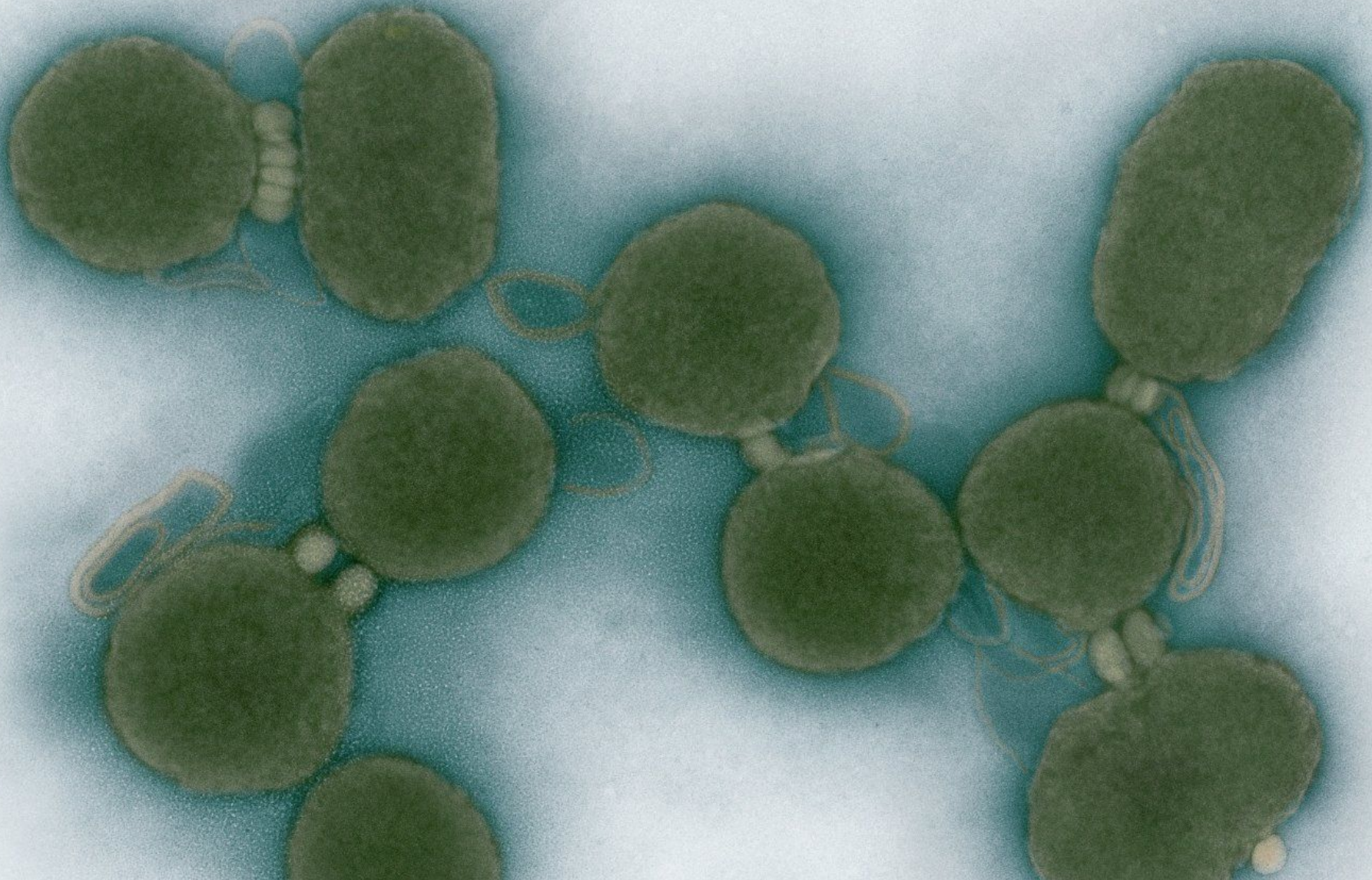
"There is the obvious reasons that all outsiders bring in unique perspectives to any form of thinking-the artist/hacker has the courage to ask "stupid questions" which may not turn out to be stupid at all. the other is that the hacker/artist/designer may also come from spaces in which the technology is as important as the different contexts that it exists in -cultural/social/political which because a scientist(at least the way in which most of them are trained) may not be aware of or not be interested in."

From Computers to Genes



Synthetic Biology

Mycoplasma mycoides JCVI-syn1.0



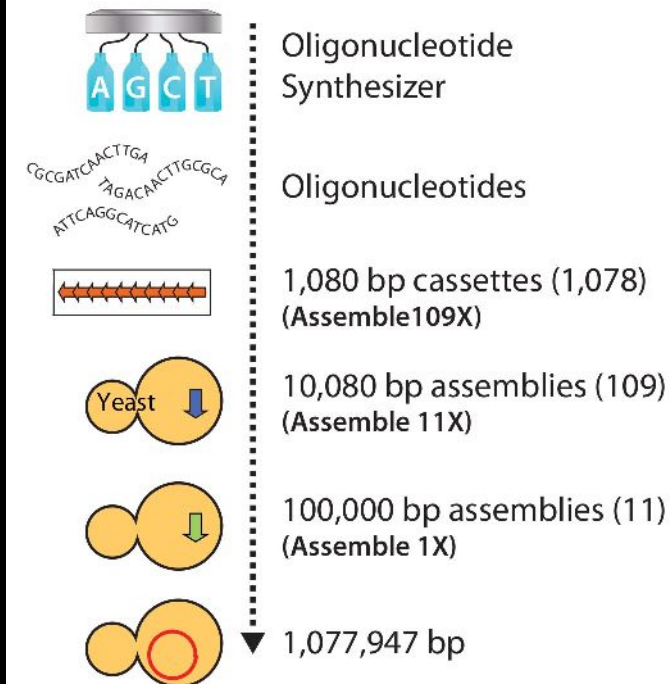
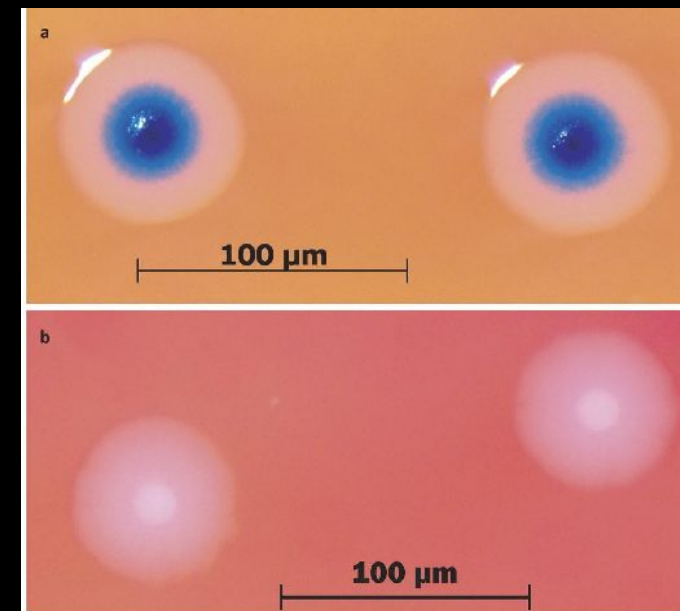
Synthetic Biology

What is Synthetic Biology

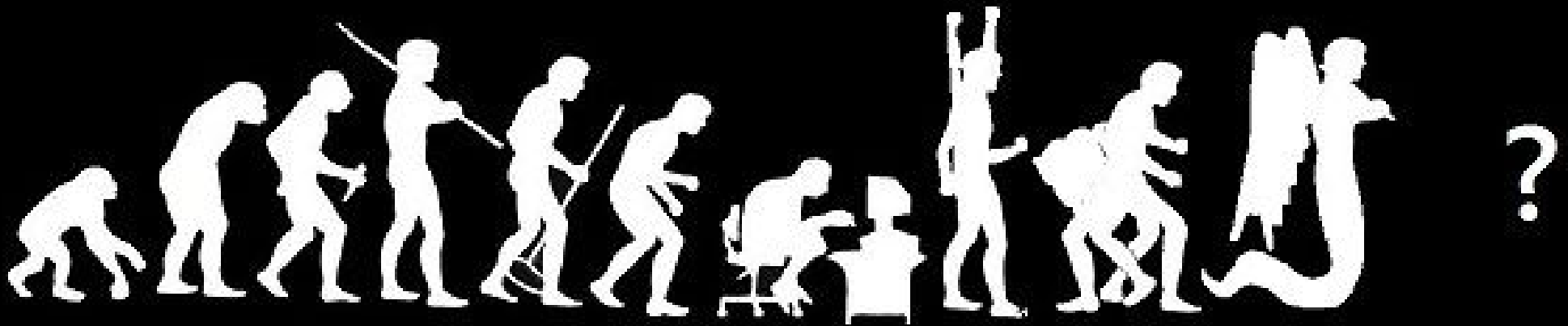
- the design and construction of new biological parts, devices, and systems
- the re-design of existing, natural biological systems for useful purposes

What is a Synthetic Cell?

- Self-replicating organism defined by synthetic chromosomes
- Process:
 - Design
 - Synthesis
 - Assembly
 - Transplantation
- Terminology
 - Hardware, Software, Bootable Systems



What's next?

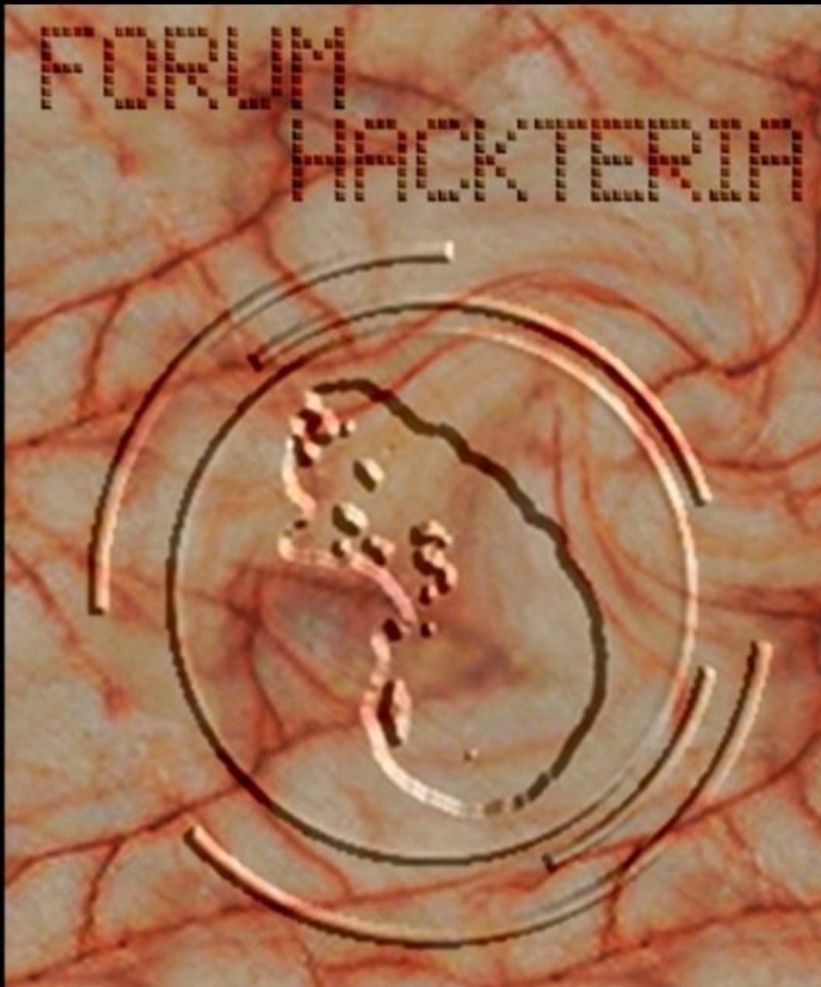


Art|Sci IGEM team, Bangalore, 2010

Hackteria Lab @ Dock18, Zürich

DOCK18

RAUM FÜR MEDIENKULTUREN



Hackteria Lab

6. - 9. April 2010 - day programm

Intensive constructivist and collaborative workshop on BioHacking, DIY Microscopy, Microorganisms, Nano-Bio-Technology, BioElectronix and more...

9. April 2010 - evening

HACKTERIA SHOW

LIVE <http://tv.dock18.ch>

10 & 11 April 2010 - day programm

Public workshop for artists, geeks and families: How to build your own microscope from a webcam.

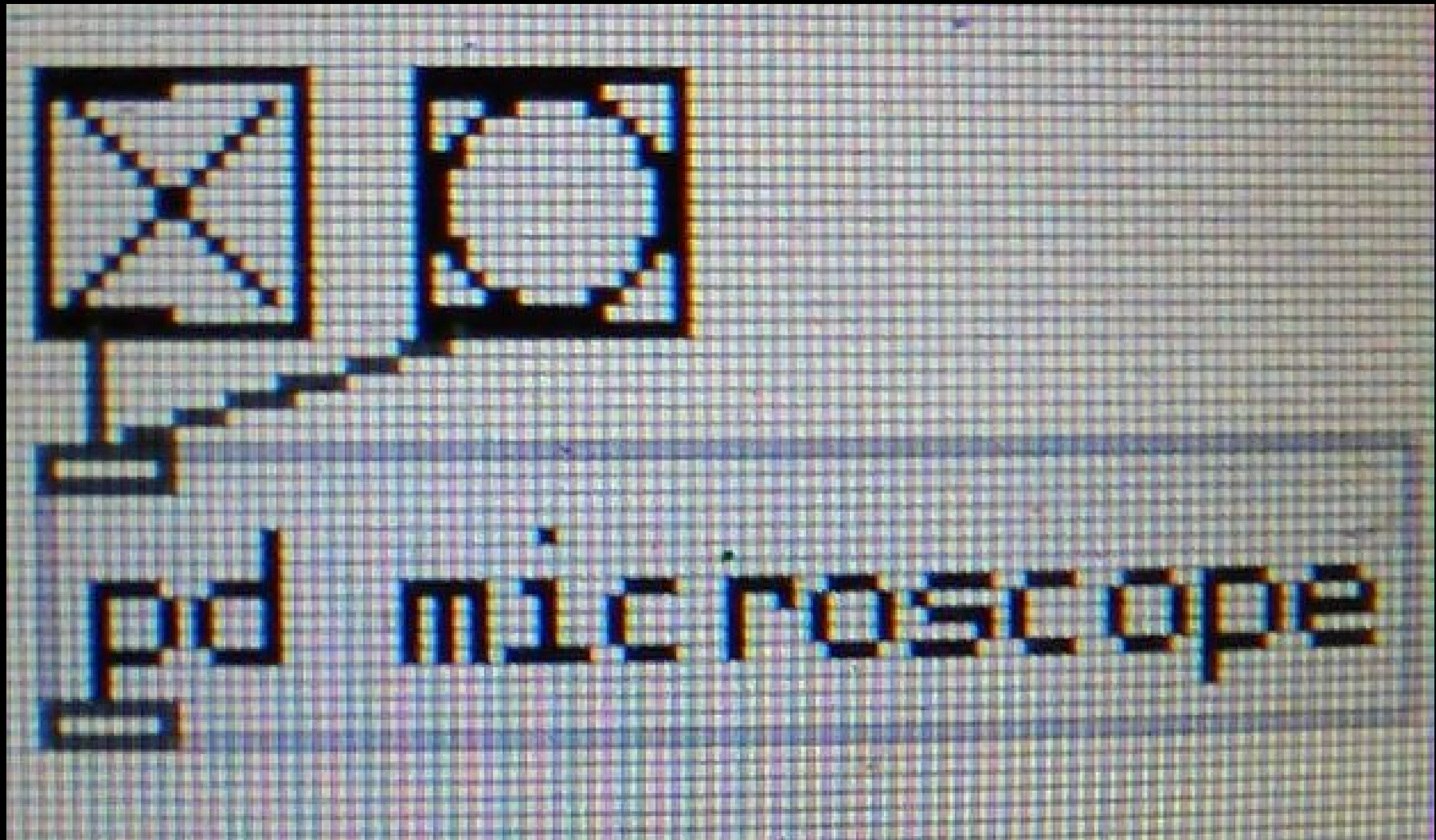
More hackteria projects...

hackteria



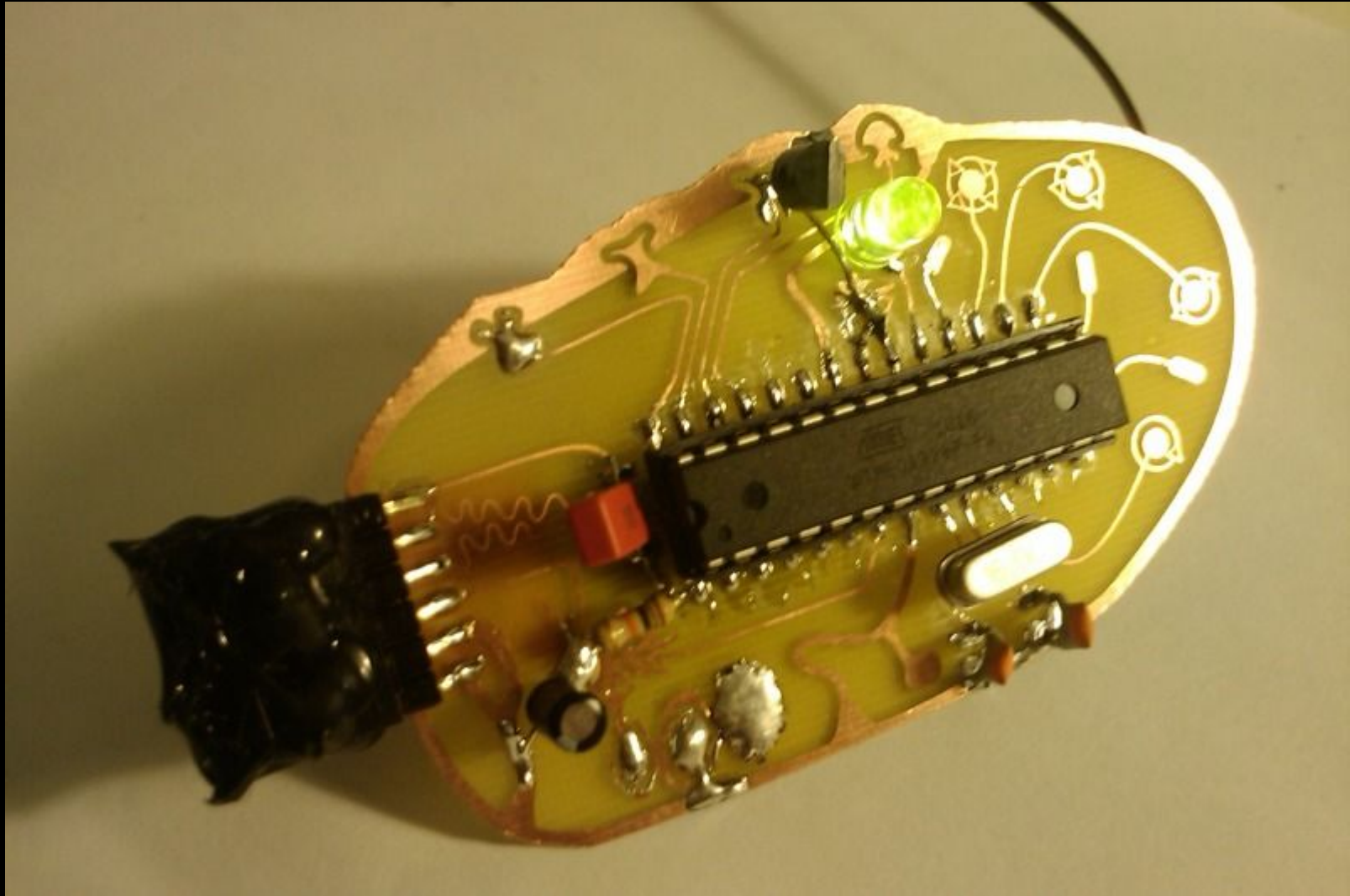
Collaboration with DIYbio, HONF, CEMA, biopresence

FLOSS for CV and streaming



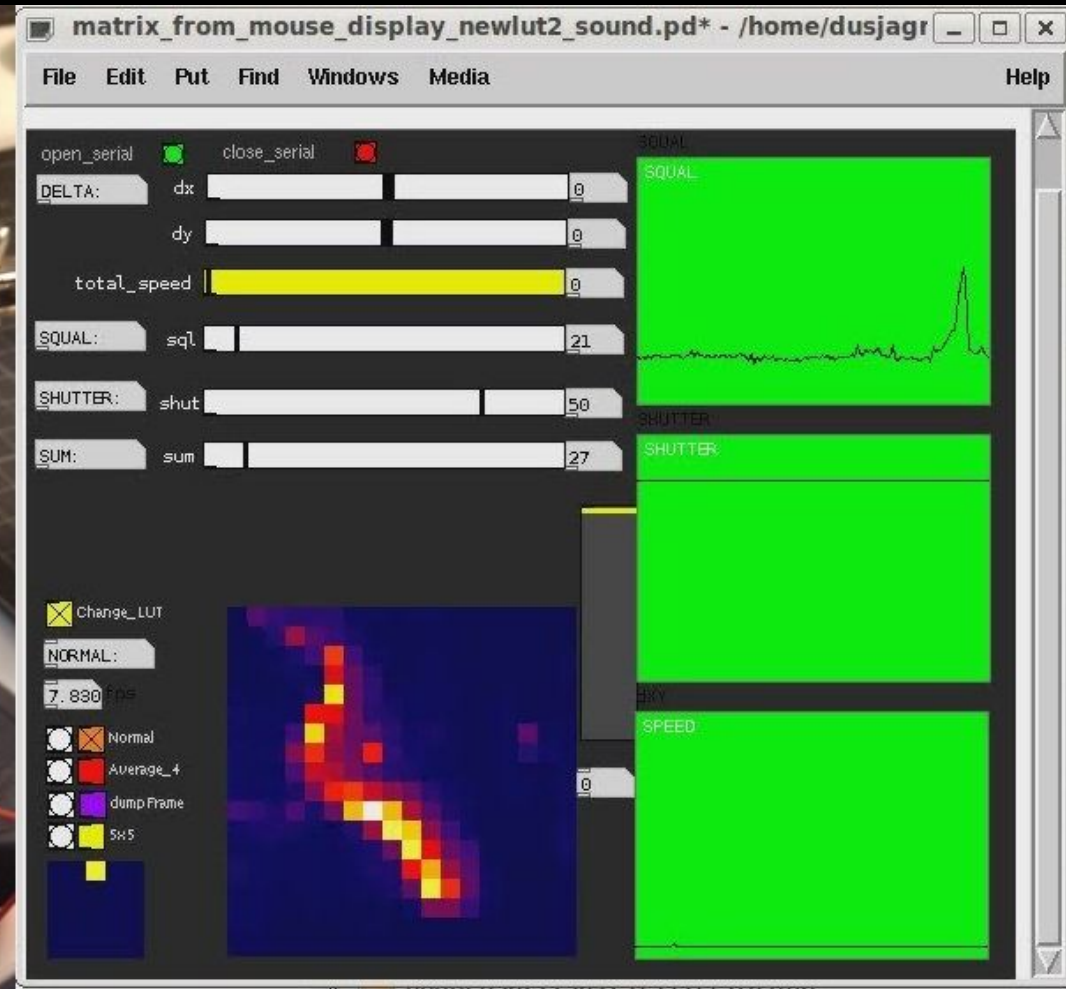
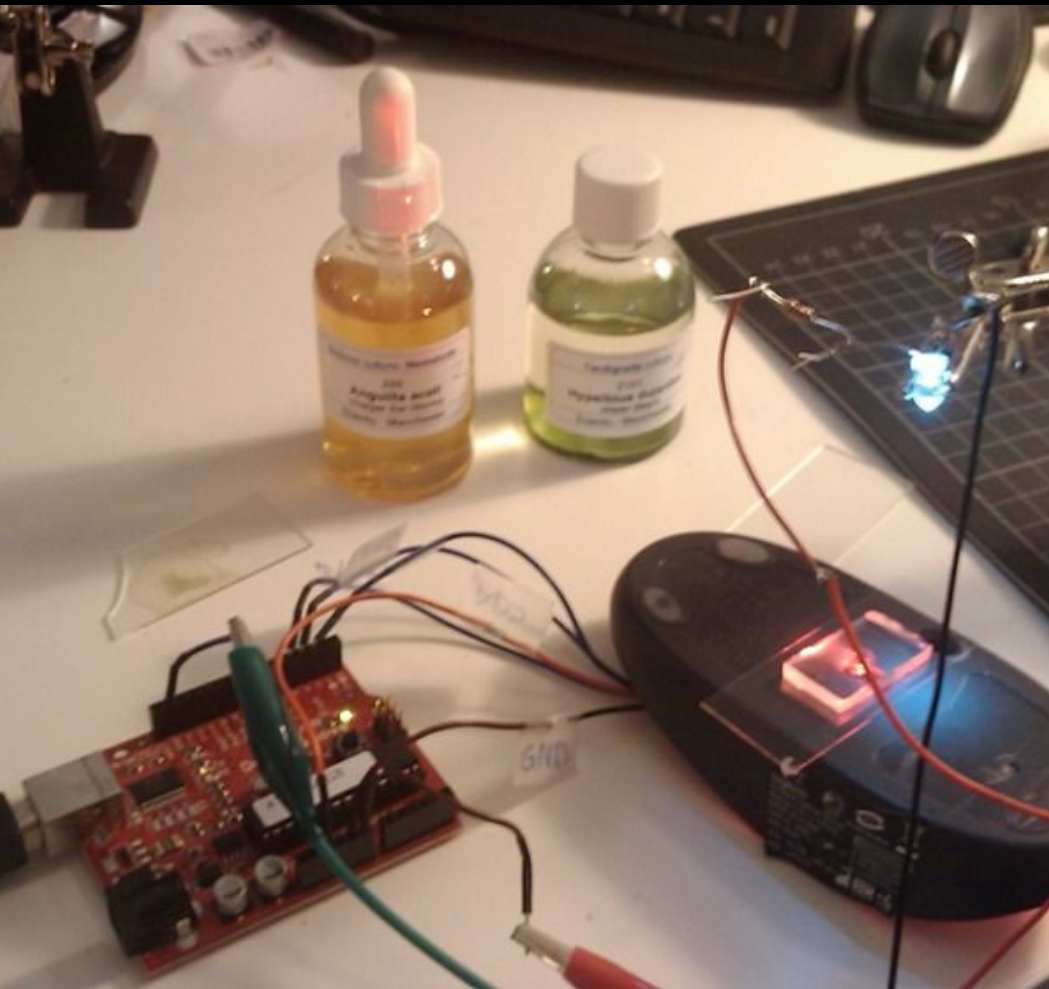
Collaboration with Alejo Duque

Bioelectronics – DIWO Chip hackteria



A bioinspired Arduino-Clone

Hacked Optical Mouse



Worm is a VJ



DIY Fermentation – Wine Making



Collaboration with House of Natural Fiber and UGM, Yogyakarta

DIY Plant Tissue Culture - Cloning



Collaboration with Georg Tremmel, bioprescence

Thanks for listening

