

Biotic Games



What are Biotic Games?

LudusScope: Accessible Interactive Smartphone Microscopy for Life-Science Education

Honesty Kim, Lukas Cyril Gerber, Daniel Chiu, Seung Ah Lee, Nate J. Cira, Sherwin Yuyang Xia, Ingmar H. Riedel-Kruse 

Published: October 5, 2016 • <https://doi.org/10.1371/journal.pone.0162602>

2016

End



Animal Controlled Computer Games: Playing Pac-Man Against Real Crickets

Wim van Eck and Maarten H. Lamers

2006



Cite this: *Lab Chip*, 2011, **11**, 14

www.rsc.org/loc

PAPER

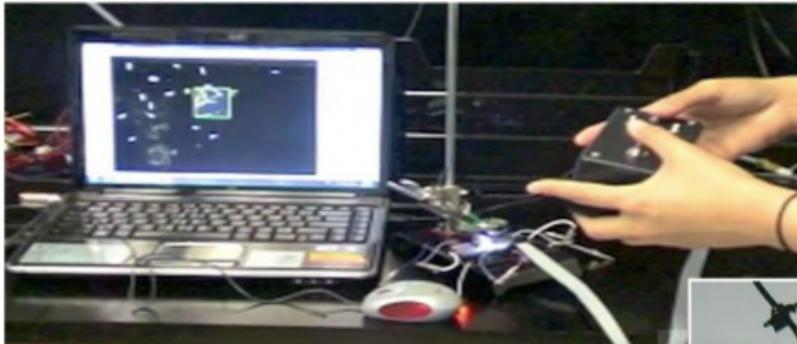
Design, engineering and utility of biotic games^{†‡§}

Ingmar H. Riedel-Kruse,^{¶*} Alice M. Chung, Burak Dura, Andrea L. Hamilton and Byung C. Lee

Received 11th September 2010, Accepted 23rd September 2010

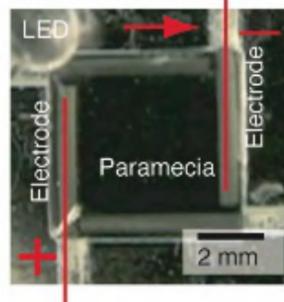
DOI: 10.1039/c0lc00399a

Biotic game set-up

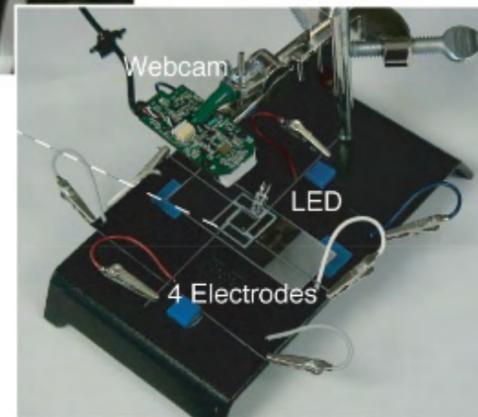


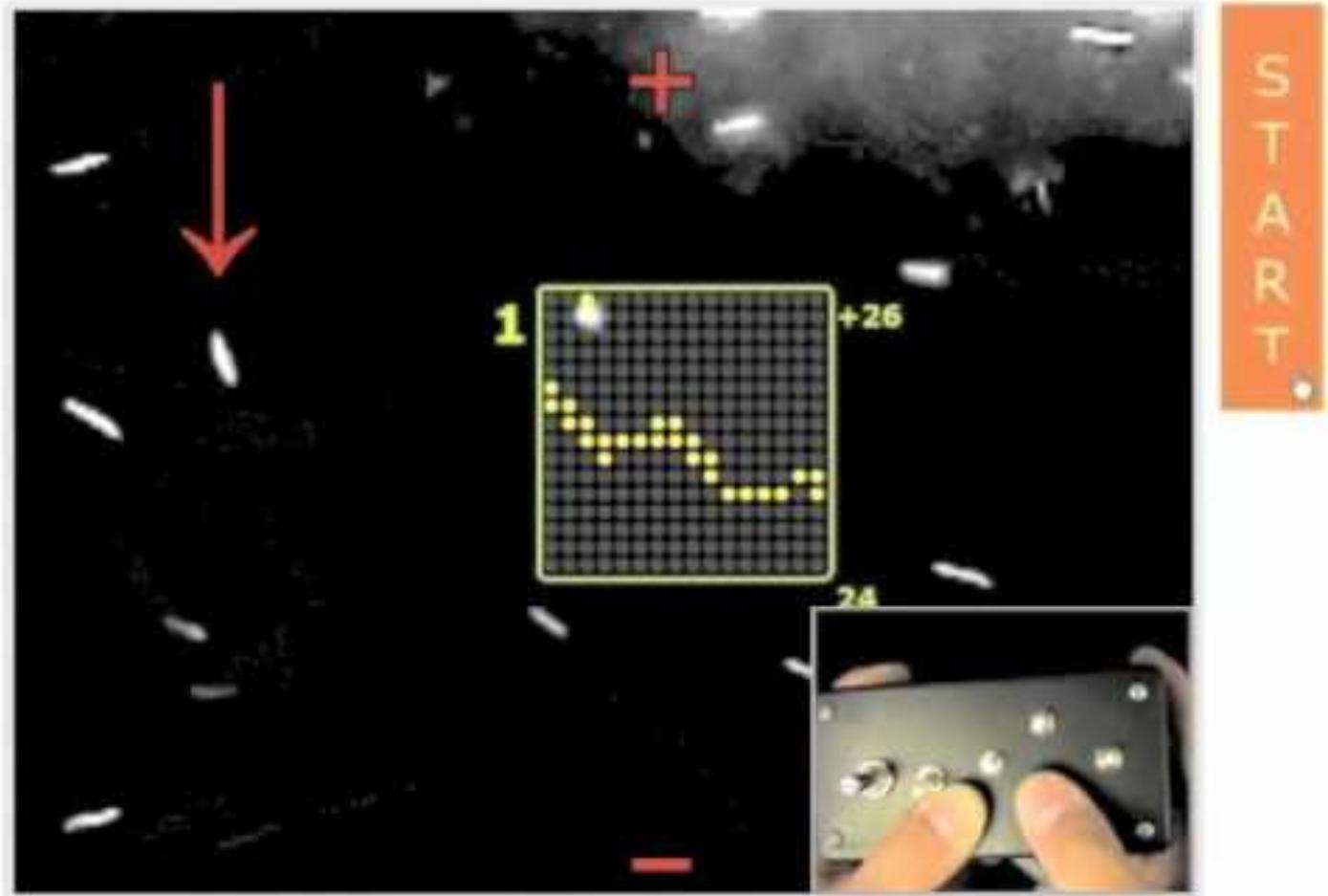
Biotic processor

Fluid chamber



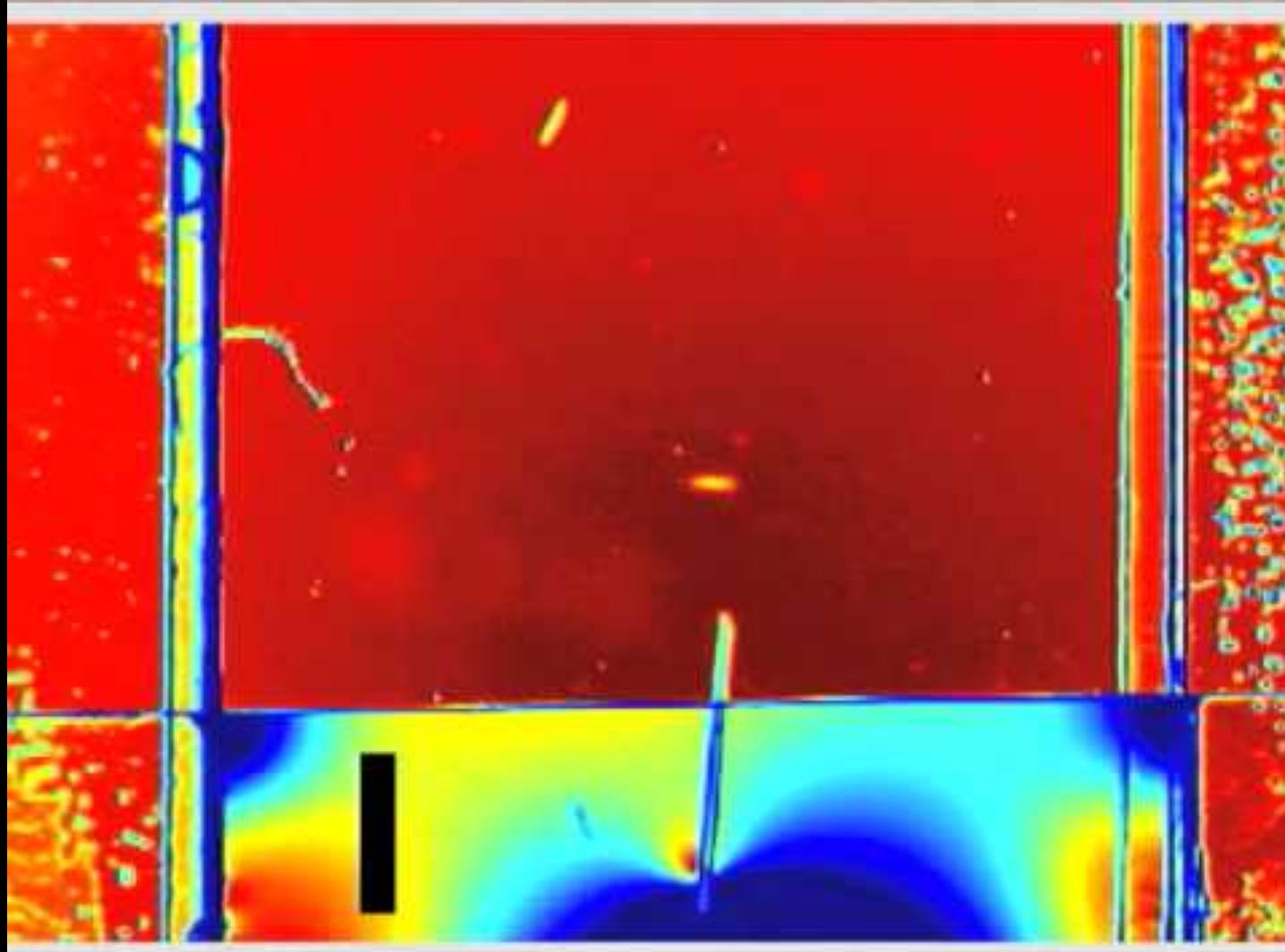
Game controller

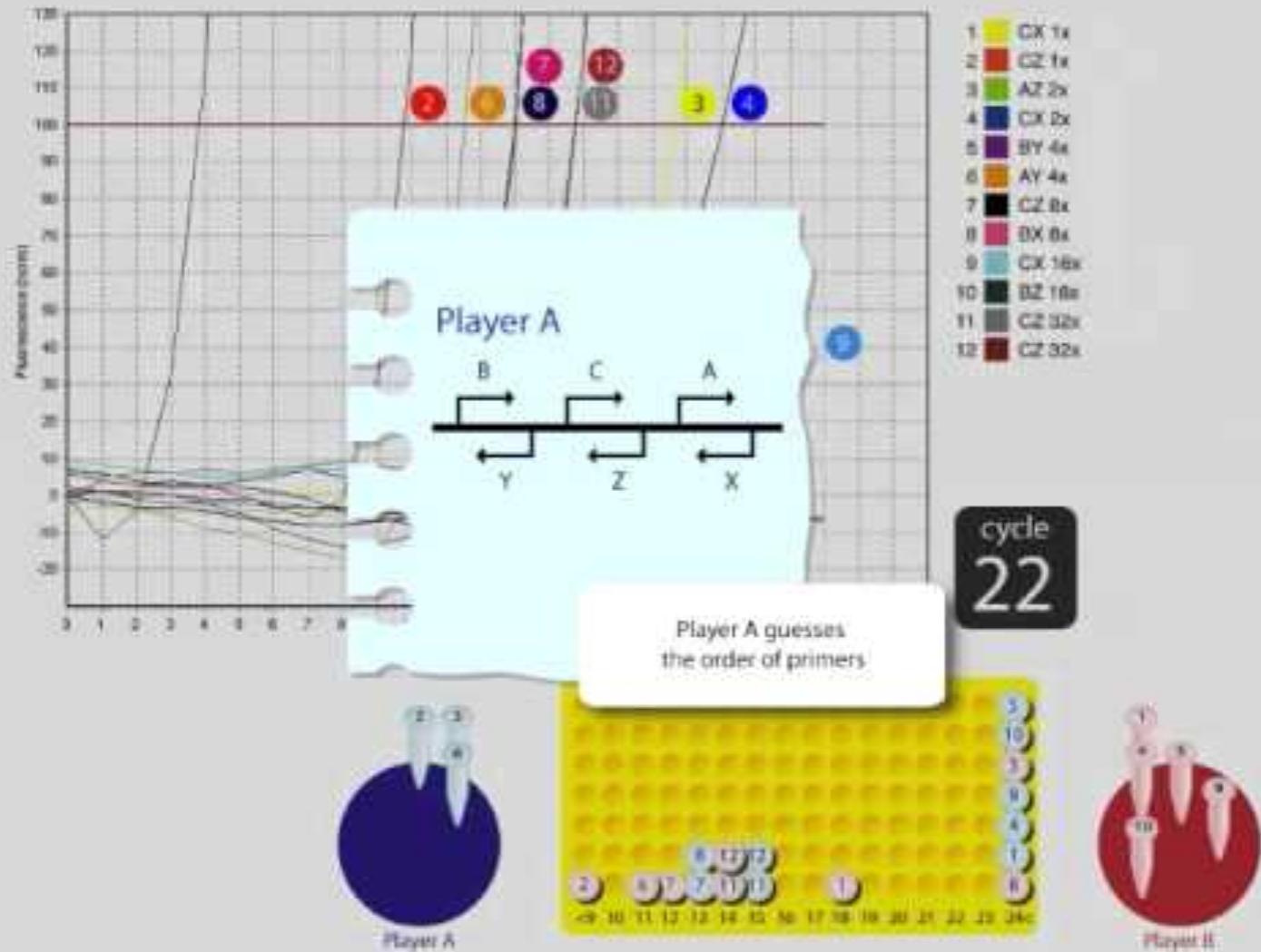


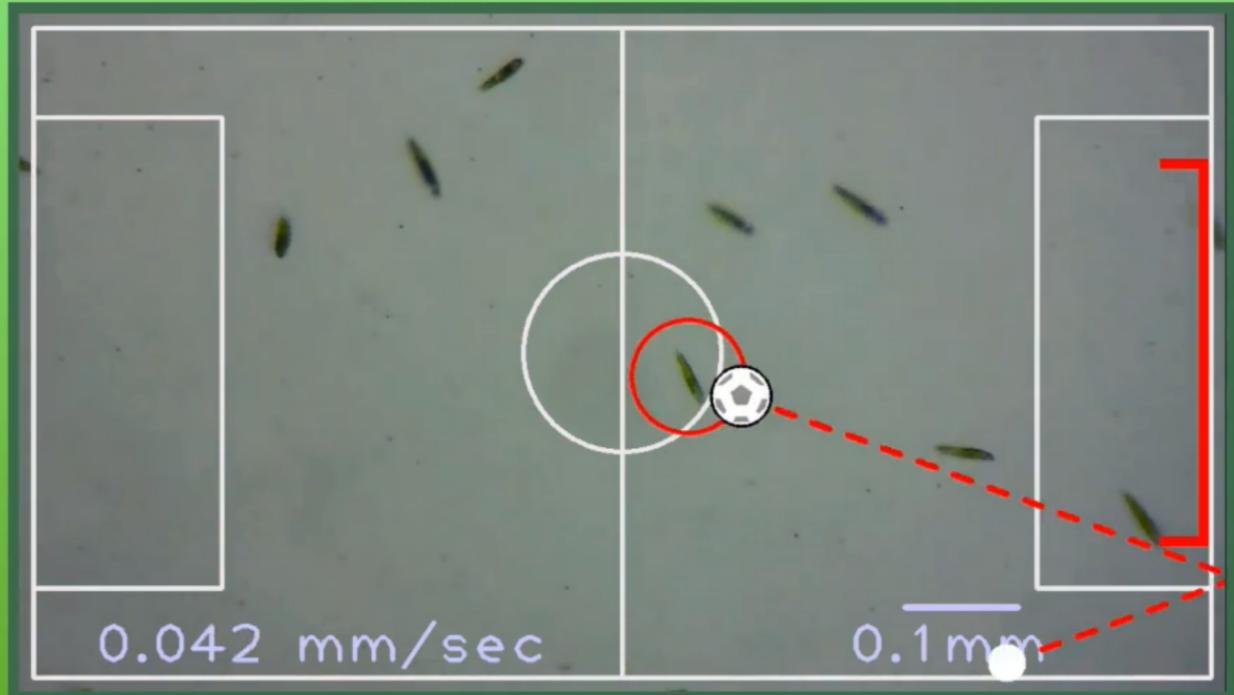


Player1

SCORE: 472



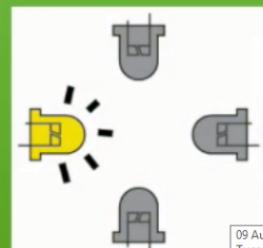




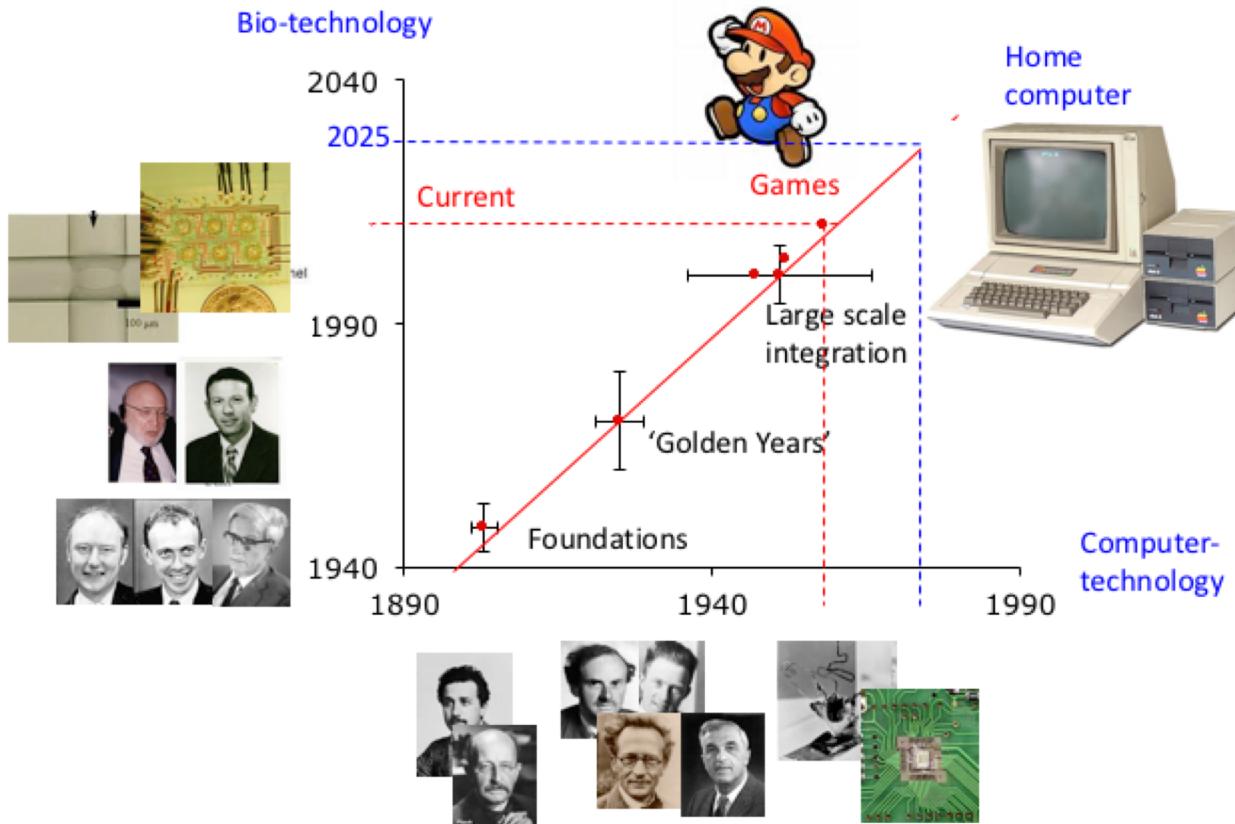
Score: 0

Shoot Ball

Time: 5



Computer- vs. Bio-tech: 50 year lag





Euglena Spaceships

2016

Roland van Dierendonck, Christian Schulz, Pieter
van Boheemen (then Waag Society) and Ingmar
Riedel-Kruse (Stanford University)



SPACEWAR

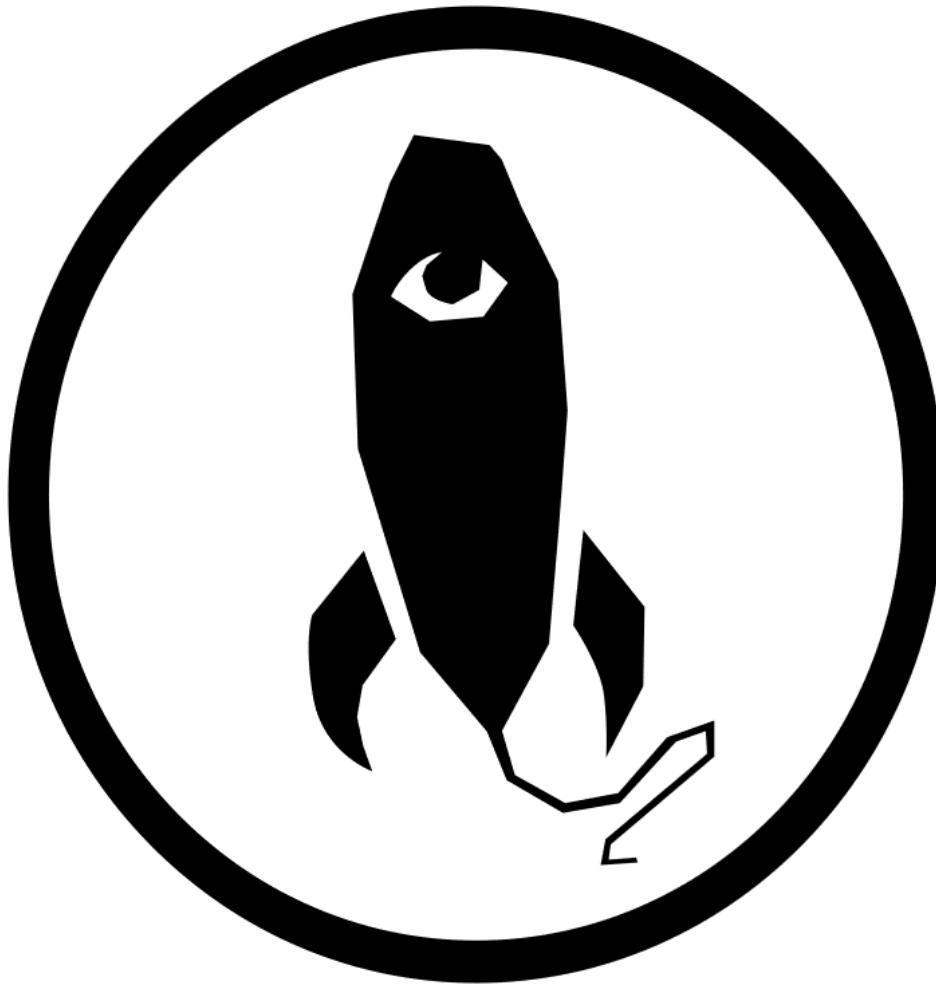
V1.71

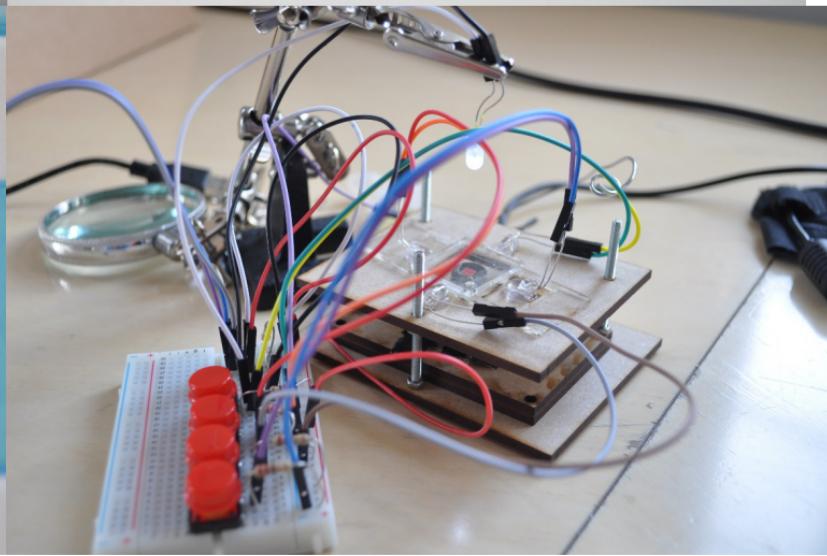
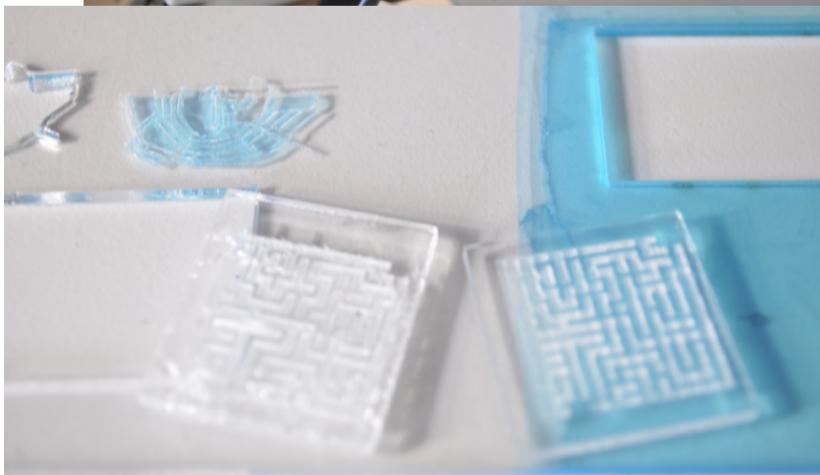
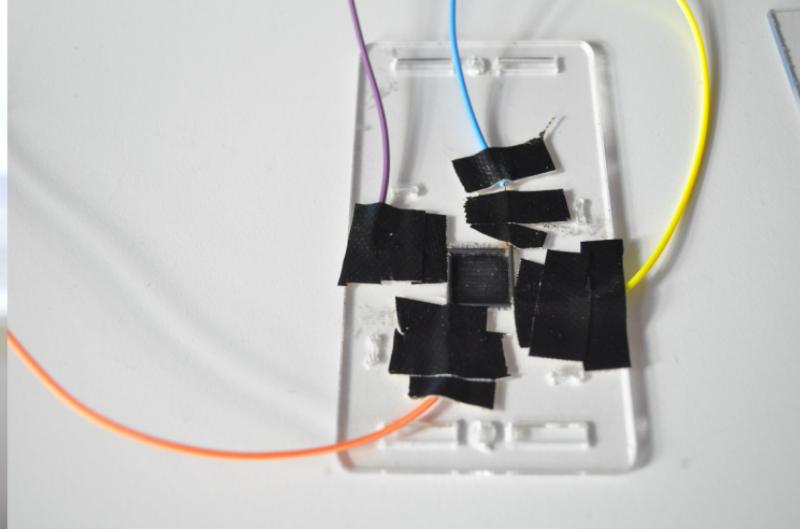
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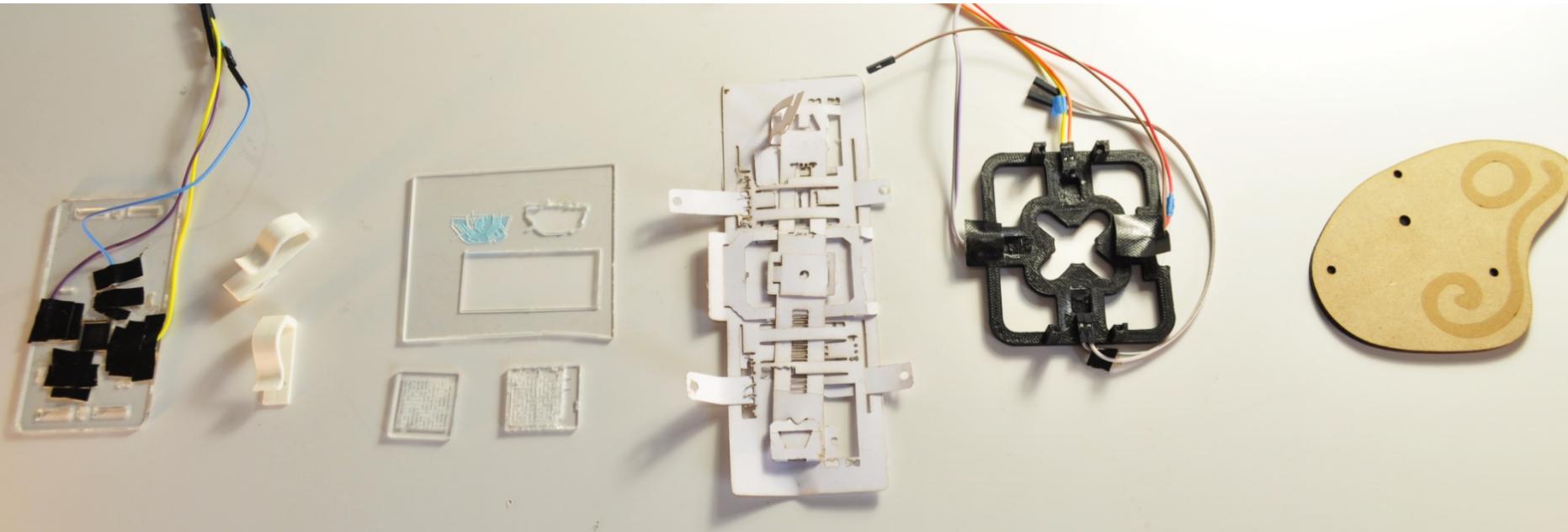
Q = 0

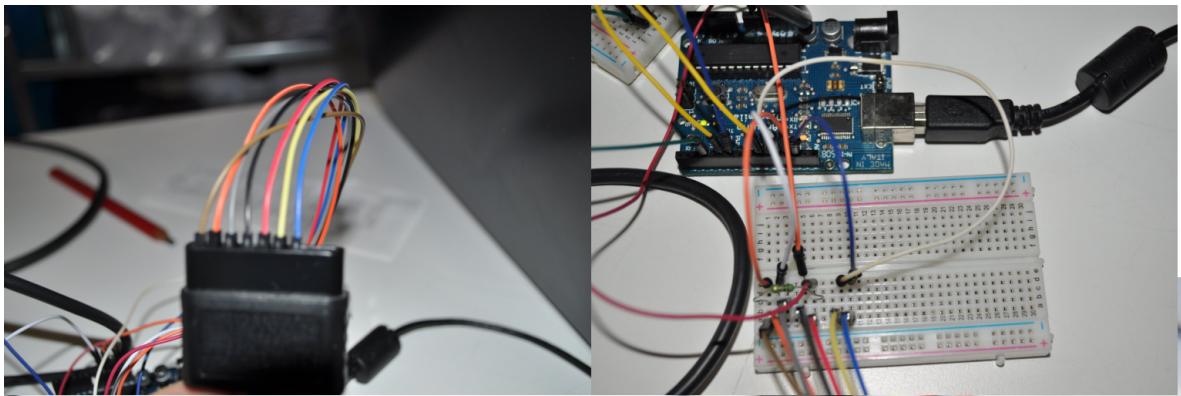
P = 0

- 1 EXIT
- 2 PLAY
- 3 ROBOT L
- 4 ROBOT R
- 5 PLANET
- 6 GRAVITY
- 7 PAUSE





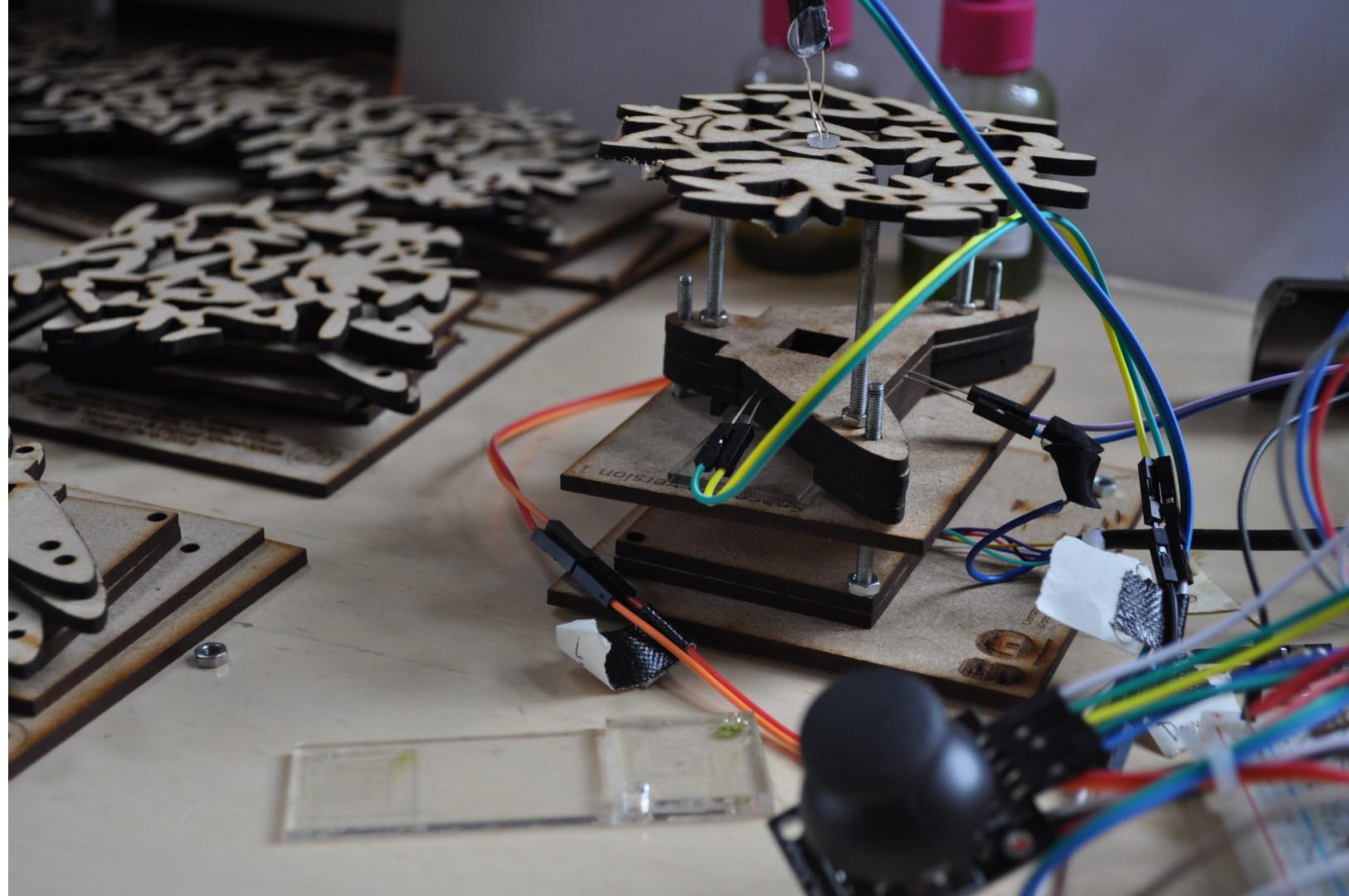






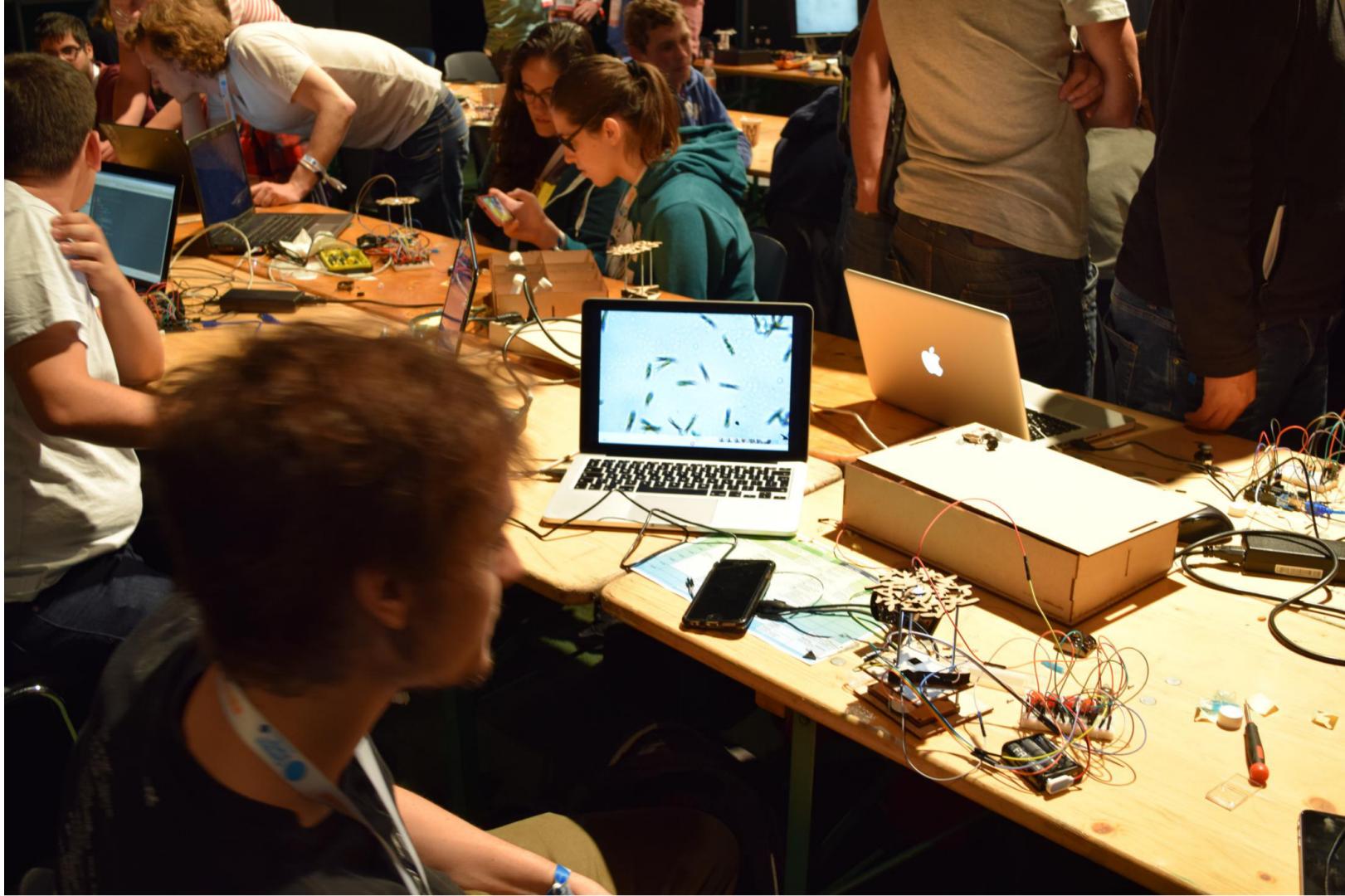




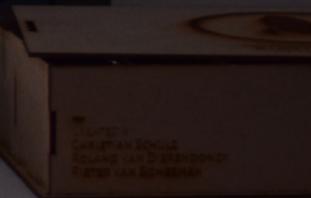
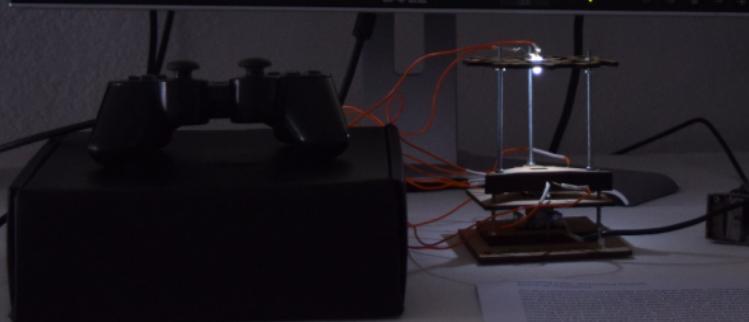


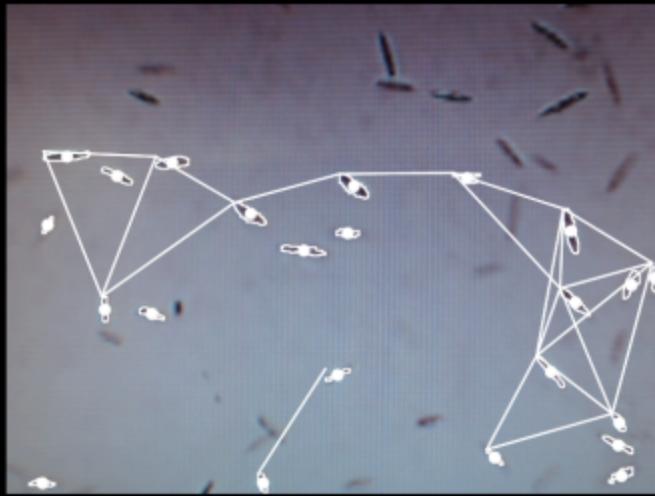


Replay

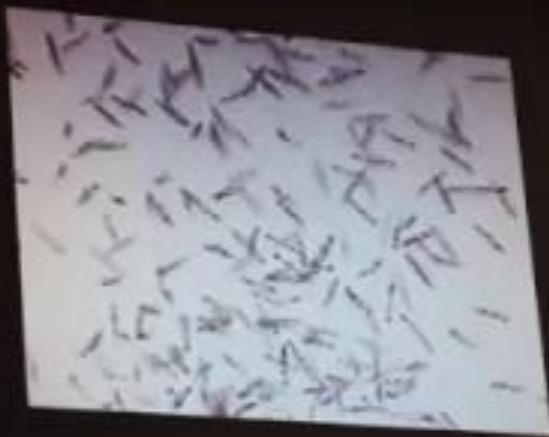










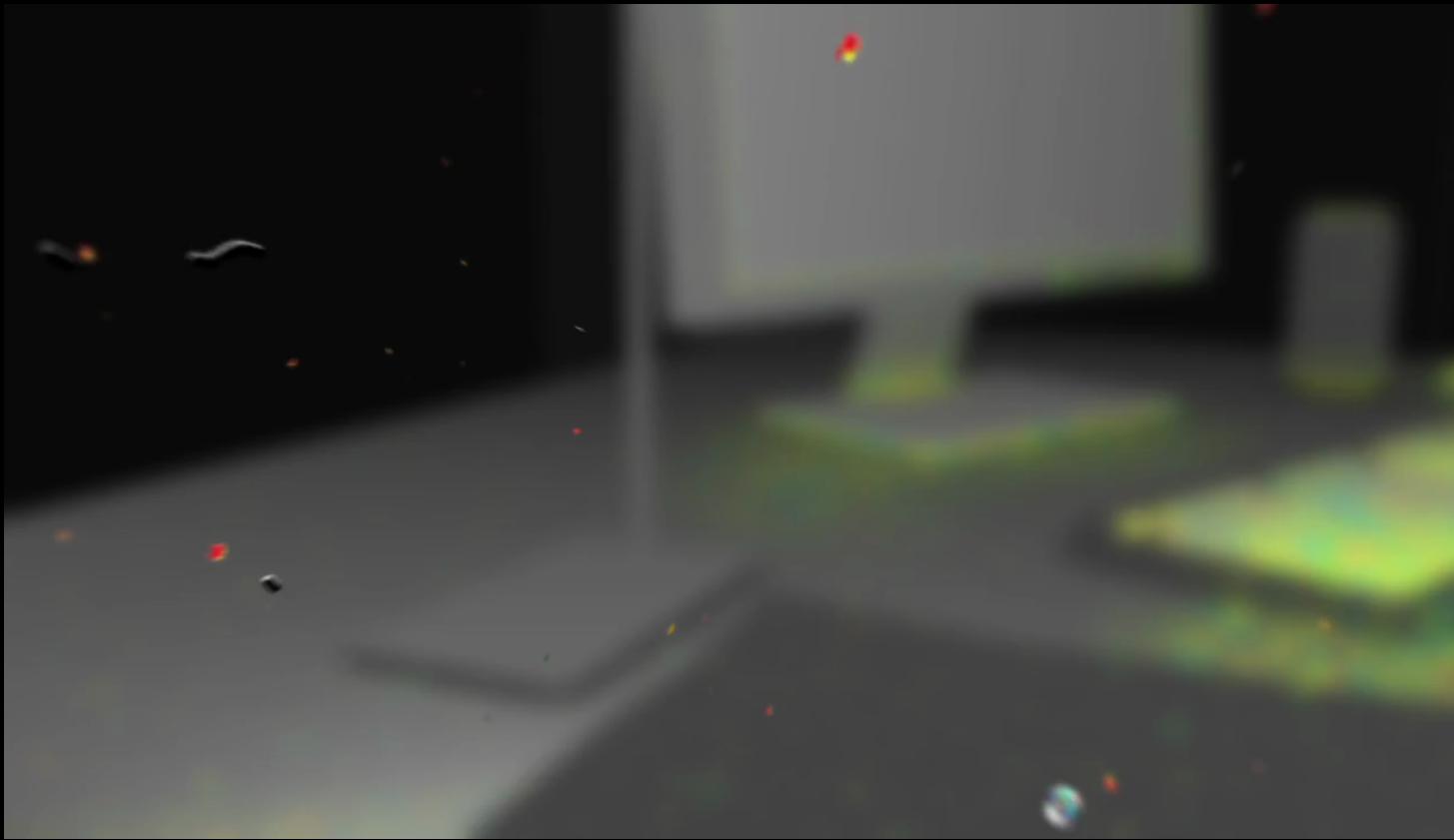




Mould Rush
GAME OVER



Raphael Kim



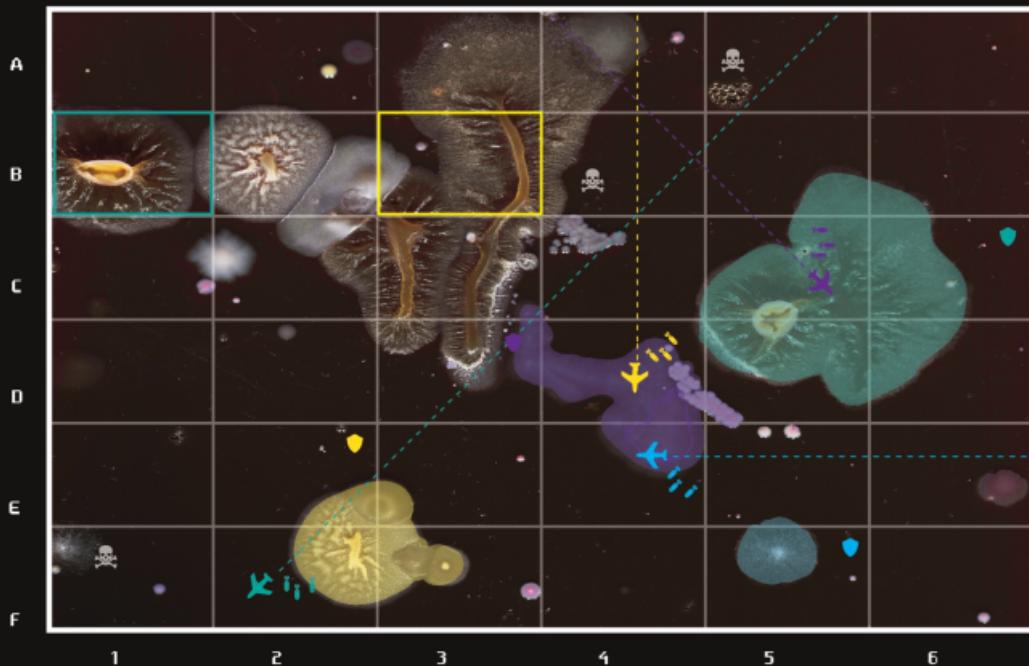
CC 3.0 SA - Biology and the Built Environment (BioBE) Center with Cameron Slayden (Cosmocyte)



GAME OVER

MOULD RUSHING : London E16 (Day 3/3) 33°C

● LIVE



LEADERBOARD :

1 = pes_nes (350)

2 = rphlKim82 (138)

3 = candida_crush (83)

4 = Ilichto404 (21)

Next Score Update :

12:30 BST

Last Score Update :

00:30 BST

pes_nes collect B1, block B6,
kill F2

candida_crush collect B3, kill D4

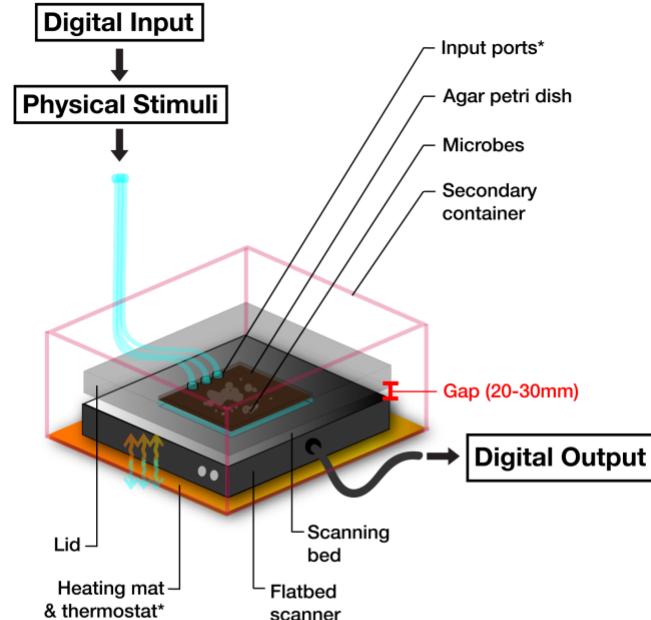
mould_rush thank you

pes_nes sorry block C6 🎉🎉🎉

rphlKim82 kill C5

rphlKim82 block D3 🎉

candida_crush Block e2



Side View (Close-Up)

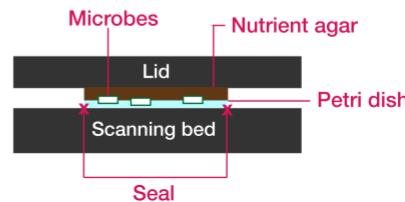
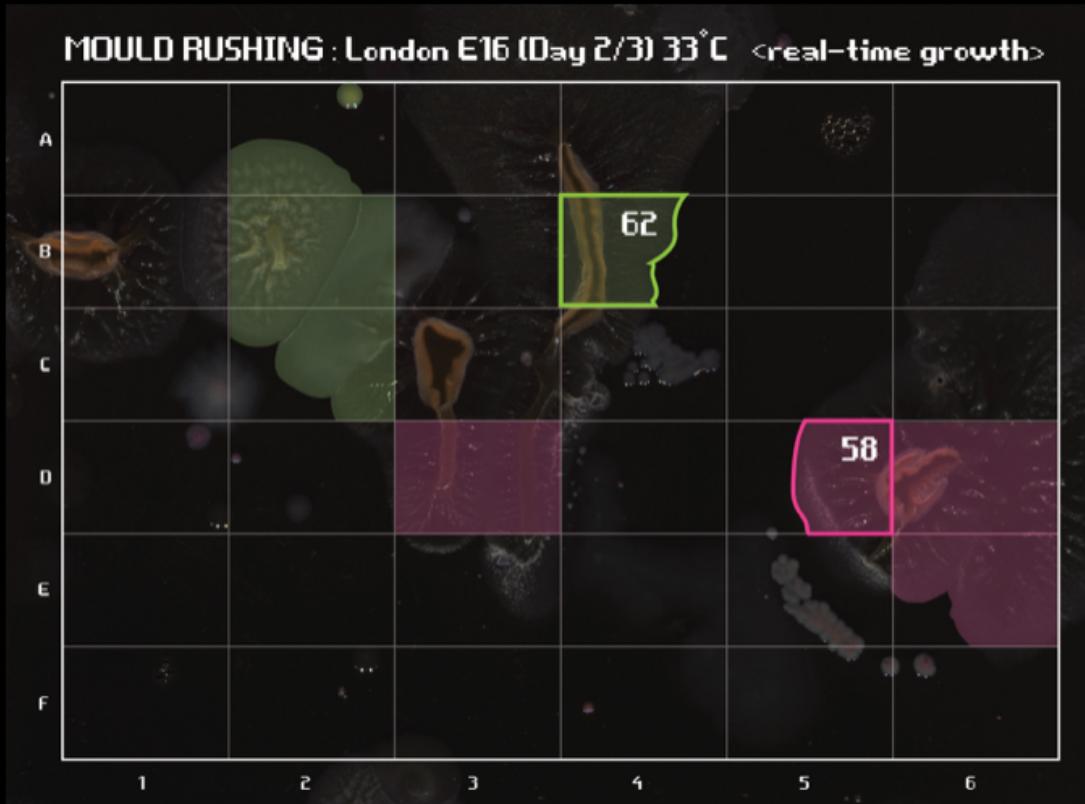


image: Raphael Kim



'Collect B4'

'Collect D5'



'Kill B2'

'Block C1'

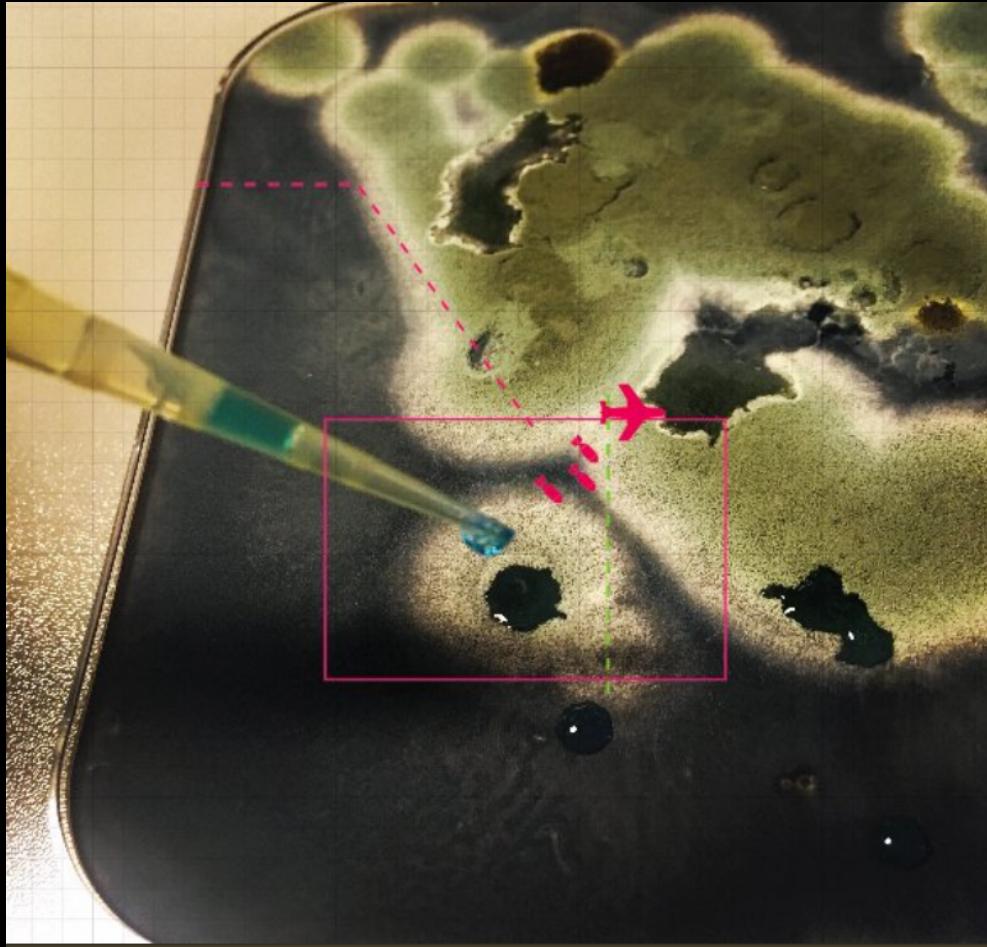


image: Raphael Kim



image: Raphael Kim

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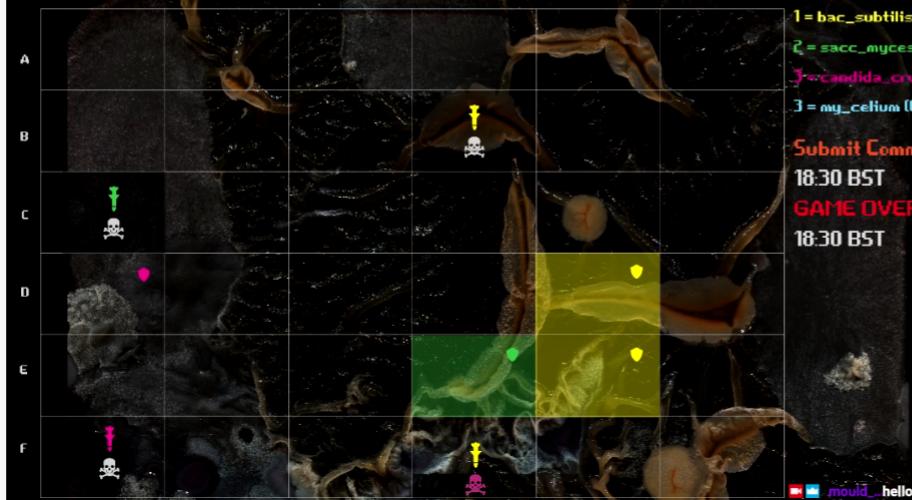
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GAME DAY 2 (London, 30 °C) PRE-RECORDED GROWTH



LEADERBOARD :

- 1 = bac_subtilis (200)
- 2 = sacc_myces (100)
- 3 = candida_crush (0)
- 3 = my_celium (0)

Submit Commands by
18:30 BST
GAME OVER at
18:30 BST



Join the chat while watching the video!

 Post a messagePost at  7:09:41

https://www.twitch.tv/mould_rush/