



subCULTron

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SUBCULTron

SUBMARINE CULTURES PERFORM LONG- TERM ROBOTIC EXPLORATION OF UNCONVENTIONAL ENVIRONMENTAL NICHES



FP7 - ICT



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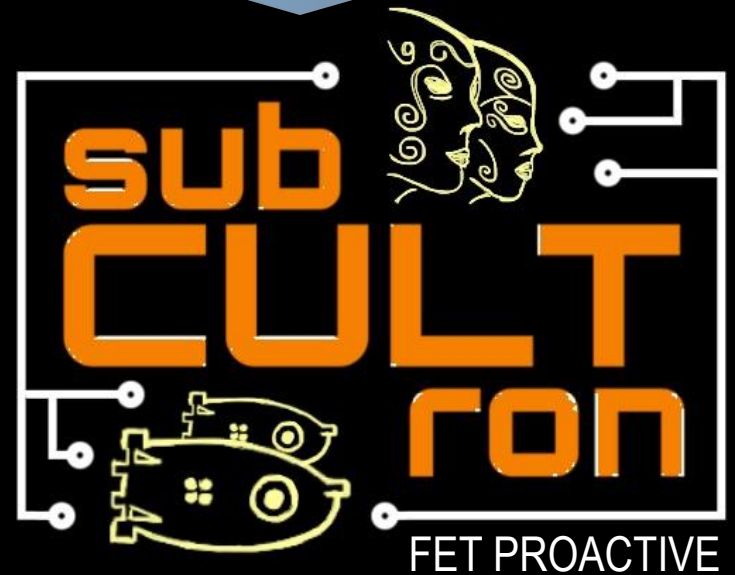
FP7 - ICT

Swarms, heterogeneity

Electric sense

Top-down coordination

NOVELTY



WHAT IS IT ABOUT?



aMUSSEL

aPAD

aFish

INFO ABOUT FUNDING SCHEME

- FET-PROACTIVE, Call „Knowing, Doing, Being: cognition beyond problem solving“ → more than “just” cognitive robotics.
- FET-Gatekeepers:
 - Long-term vision: Ecology/Society-pervasive robot swarm
 - Interdisciplinarity: HW engineers, computer science, biology
 - S&T targeted: Several clearly formulated hypotheses & experiments
 - High risk: Interdisciplinarity, new technology, size of system, longevity, Heterogeneity
 - Novelty: Largest underwater swarm, electric sense,
 - Foundational: e.g., aMussels (new paradigm), E-sense
- Next such call: not known.
URL: http://cordis.europa.eu/fp7/ict/fet-proactive/home_en.html

THE COMPONENTS OF SUBCULTRON

Artificial Cognitive Cultures

Long-term

Heterogeneity

Adaptation/
Learning

Energy saving

Energy harvesting

Redundancy,
High Number

Long-term memory

aMussels

aFish

aPads

Habitat
fragmentation

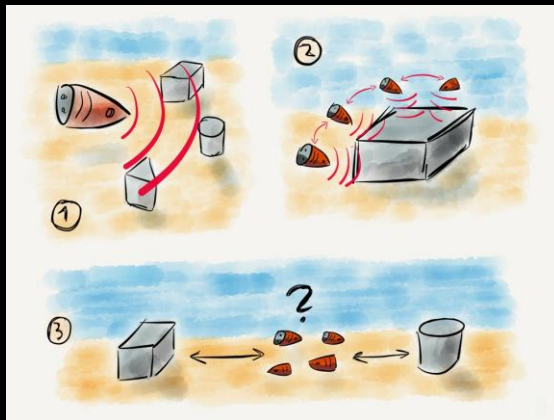
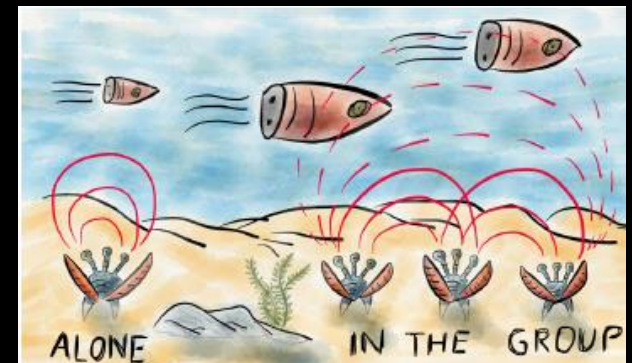
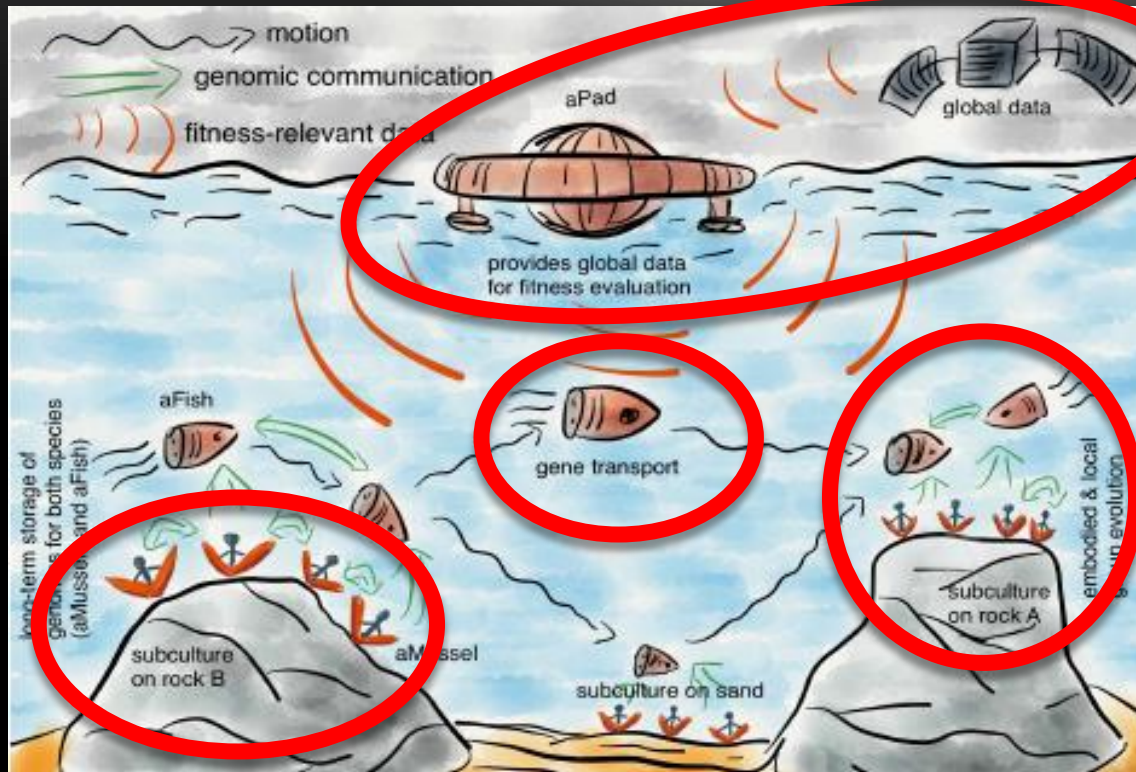
Gene pool change

Individual Learning

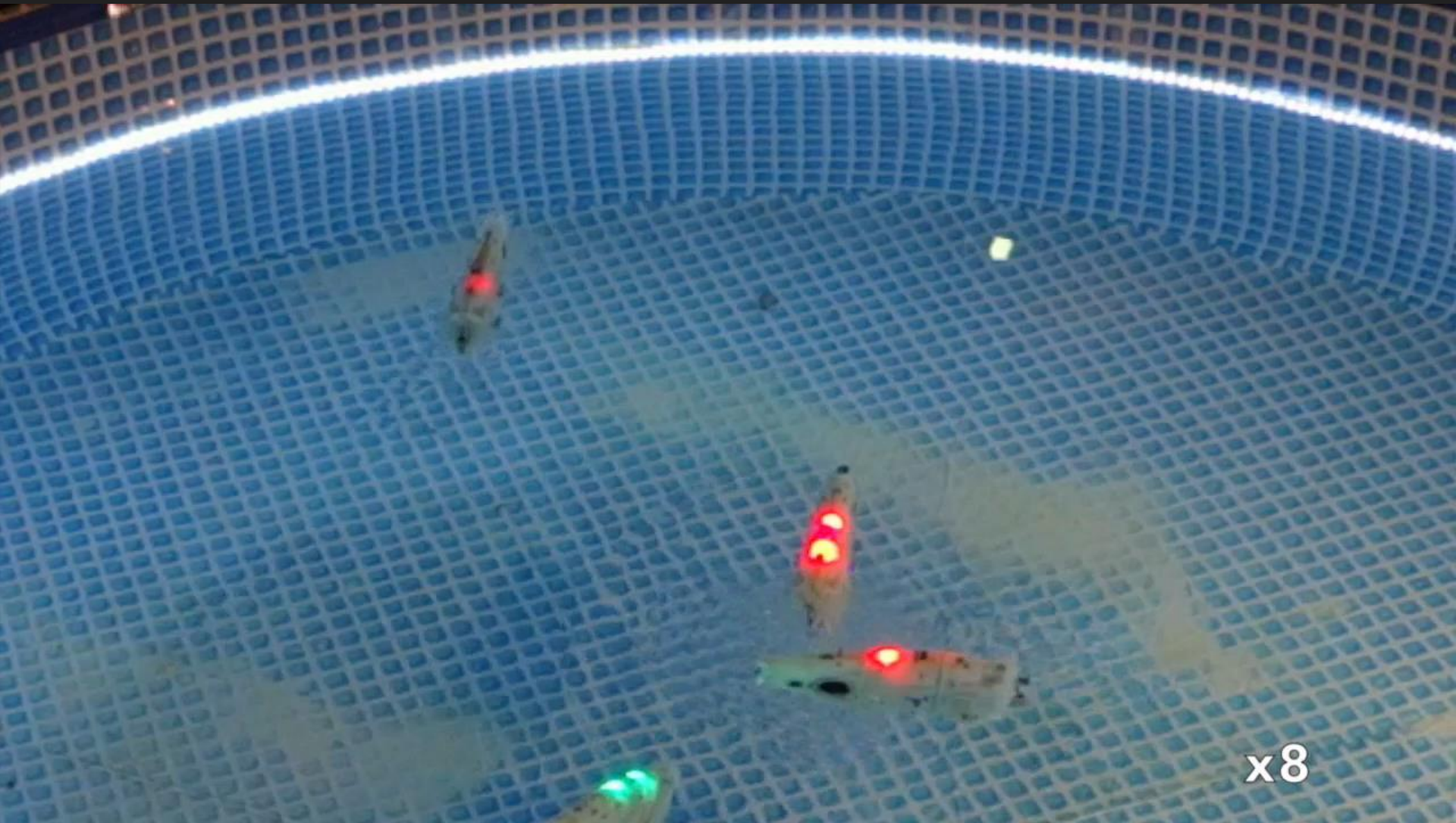
Interaction (group
& environment)

Cultural
composition

SOME FUNCTIONITIES TO ACHIEVE OBJECTIVES



WE HAVE A GOOD POINT TO START FROM:



x8

THE YEAR OF CoCoRo PLAYLIST ON YOUTUBE (#TYOC)

- 52 videos in 52 weeks throughout 2015



THANKS