

Photo Album EMBODYⁱ



EMBODY¹
Embodied Intelligence
Workshop

New technologies and design approaches for building physically embodied intelligent agents and artefacts.

Wednesday 17/03/2010, Livorno, Italy

**The Impact of FET Projects on Education
and Research: the Experience of the ARTS
and CRIM Labs of the Scuola Superiore
Sant'Anna**

Paolo Dario





Innovation and Innovators

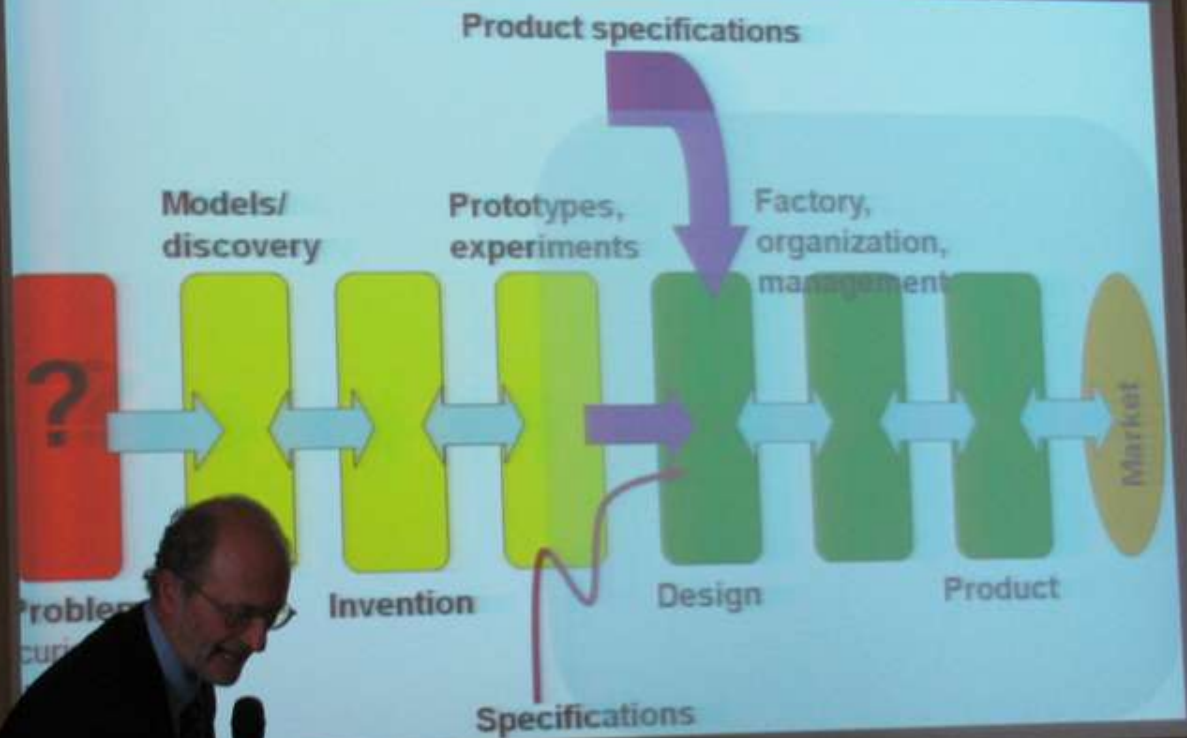
Educating the Engineer of the 21st Century

able to manage new challenges
and opportunities for Society and
Industry





Going beyond traditional engineering education



FET Mission (2)

Role of FET: Pasteur's Quadrant

	Consideration of use? No	Consideration of use? Yes
Quest for fundamental understanding? Yes	Pure basic research ERC	Use-inspired basic research FET
Quest for fundamental understanding? No	N/A in ICT or ERC	ICT (Carlson)



Rationale: octopus arm amazing features

- No rigid structures: capability to squeeze into small apertures (same size of their brain capsule – Ex: 1-inch hole)
- Virtually infinite number of DOF
- All-direction bending
- 194% of elongation of each arm
- Variable and controllable stiffness
- 40N pulling force (1 arm, @3/4 of length)
- Manipulation capability
- Distributed control (50×10^6 neurons in each arm, more than in the brain)





A new strategy for FET



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FET Knowledge Partnership - meeting 2017 - March 2017 - 10. Slide



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FET European High-level meeting 2017 March 2022 – 10. Bonn







History of Embodied Intelligence - 2

The rationale and objectives

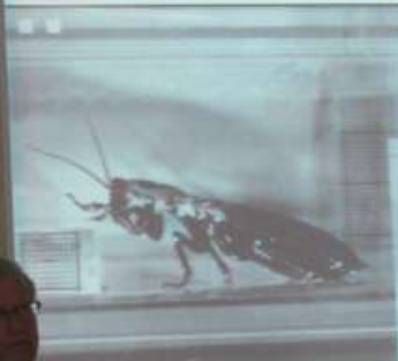
"New Technologies and design approaches for building physically embodied intelligent agents and artefacts, with emphasis on the relationship between shape, function and the physical and social environment"



1st Embodied Intelligence cluster Meeting, Livorno, 17th March 2010

Managing complex bodies "morphological computation"

pictures and ideas:
courtesy Roy Ritzmann
Case Western Reserve
University



European Challenges and Flagships 2020 and beyond

Report of the ICT Advisory Group (ISTAG)





European Challenges and Flagships: 2020 and beyond

Report of the ICT Editorial Group (ITSMG)