

ADAPT

Kick-off meeting

Paris January 20-21, 2003

Venue: Hospital Pitié-Salpêtrière – Batiment de la Force (see map), door at the left, ground floor

Preliminary Program

January 20: Past and Present

- 14:30 Introduction and News Giorgio Metta
LIRA-Lab (Giulio Sandini), Sajit Rao
University Paris-V Arlette Streri
UPMC/CNRS Jacqueline Nadel, Pierre Canet
University of Zurich Martin Krafft
- 19:30 Dinner

January 21: Future

- 9:00 LIRA-Lab Giorgio Metta, Riccardo Manzotti
University Paris-V Arlette Streri
UPMC/CNRS Jacqueline Nadel, Marie Maurer,
Pierre Canet, Coralie Sam
University of Zurich Rolf Pfeifer
Discussion
- 13:00 End of meeting (Lunch)

ADAPT
Artificial Development Approach to
Presence Technology

Paris, January 20th, 2003

ADAPT Consortium (IST2001-37173)

- 1. DIST, University of Genova – Italy: Giulio Sandini***
- 2. Dept. of Information Technology University of Zurich – Switzerland: Rolf Pfeifer***
- 3. CNRS – Delegation Paris B – Paris, France: Jacqueline Nadel***
- 4. Université Paris V – Paris, France: Arlette Streri***

What is PRESENCE

- Coordinated action called PRESENCE
- 11 funded project (among them ADAPT)
- One of them has the role of coordinating the remaining 10
 - Themes: virtual reality (a lot), measurement of “state of presence”, hardware for presence research, perception

OMNIPRES

- Coordinating PRESENCE initiative projects
- Try (I guess) to save money by locating areas of potential overlap
- In practice:
 - Organize joint meetings (and joint reviews)
 - Organize joint publications (inter-project)
 - A lot of interest on how to measure the “state of presence”, it might turn out to be useful
- Last week meeting in London of the Omnipres board

What does concern us?

- Joint review meeting (early) in Venice May 5-7, 2003. It's not a joke!
 - Tentative agenda: presentation of the project to a general audience+reviewers, separate meeting with reviewers, other events related to presence (e.g. demo), invited speakers
 - Because it's early, the main message we have to convey is that we have set goals, procedures, definition of experiments, etc. I don't think they'll expect results
- A chance to do also one of Adapt's meetings
 - If we get a room
- There's going to be a chapter in a forthcoming (late) yet-to-be-defined handbook of presence research
 - Including topics like theory of presence, experimental work, etc.
- If we're willing to, we can contribute to the presence research web site with documents, pointers to conference, etc
- There's a list of future meetings and events (some of them are going to be also reviews), I'll circulate it later (in a few weeks time, when it gets confirmed)

Documents/administration

- Form of reporting documents
 - Definition of the format for reporting to the Commission
 - Effort, work done, it's about 1 page overall per partner (month 6 management report and then every six months)
- Cost statements (first due by October 2003)
 - Rules and forms

Scientific Framework (a reminder)

The sense of “being there” (the sense of presence) is an holistic sensation where the single perceptual and affective components, even if mediated by different sensory channels, give rise to ***unified sensations*** (like the smell of sea composed of a mix of different fragrances yet generating a single percept). How this holistic sensation is formed is the issue we want to address in ADAPT.

More specifically the project will investigate how the different sensory aspects of an object/event are merged into a unified representation which includes action.

Objective(s)

The main objective of ADAPT is to study the process of building a coherent representation of visual, auditory, haptic sensations, and how this representation can be used to describe/elicit the sense of presence. The goal is the “understanding” of representation in humans and machines.

We intend to pursue this within the framework of development: i.e. by studying the problem from the point of view of a developing system.

Two methodologies:

- on one side we will investigate the mechanisms used by the brain to learn and build this unified representation by studying and performing experiments with human infants
- on the other side we intend to use artificial systems (i.e. robots) as models and demonstrators of perception-action representation theories

Breakdown of work

1. propose a theory of presence from a multidisciplinary perspective spanning cognition, perception, and robotics
2. study the sense of presence within the framework of embodiment and body morphology
3. study how the perception of self evolves during the early stages of human development
4. implement an artificial instance of such developmental process in an embodied artifact as a synthetic model and demonstrator

Scenario

The reference scenario is that of a system/person manipulating objects and trying to discover common features of the resulting events. Features can be sensorial as well as motor (affordances)

To test if coherent representations have been discovered, behavior of the system in the presence of “normal objects” will be compared to the behavior in the presence of ambiguous objects “hallucinations”

e.g. how does our behavior change if an object appears to be spiky?