

PARTICIPANT FORM for the SUMMER SCHOOL
Constructivism and Enaction
A new paradigm for Cognitive Science

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I. – SITUATION

Status : University teacher Research scientist Thesis student Post-doc Other :

University/ Laboratory : Europaena Center for virtual reality

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Special information(s) (article, scientific responsibility, participation to research projects, other...) : everything is on my website.

III. – RESEARCH THEME

Please indicate briefly (10 lines max) your themes of research, and 4 or 5 key words

Since the end of 2004, a doctoral thesis in psychology, taking place in the *European Center for Virtual Reality (CERV)* in Brest with the participation of *CECLAA* enterprise, has been about spatial representation amongst blind sailors. Firstly, the project consists of understanding spatial representation of blind people. In this respect, I realize different experiment with spatial configuration and cartographic maps. Secondly, I'm working with informatics technicians in order to develop vocal and tactile maritime navigation software connected to GPS. This should permit blind people to set the ship itineraries and control it during voyages. In order to do that, we use a force feedback haptic interface, the *PHANTOM Omni* from *SensAble*. An interesting point is to compare blind subjects' activities when they touch maps in laboratory or in situ. The differences of exploratory strategies between these two situations show us how deep immerse they are in virtual maps.

III. – VIDEOS AND EXPERIMENTAL MATERIAL

Moments of relaxation might be the occasion to share and show original scientific video documents (not too long) or experimental material (which could be used by all the participants). A video party and an experimental demonstration session have been planned. Could you indicate video or experimental material you would like to present.

Videos :

I suggest two videos :

- a blind sailor which is helming a boat.

Experimental demonstration :

I purpose two kind of blind folded experiments :

- Touching spatial configuration and reproducing it with one quart of turn and one half of turn.
- Touching tactile maritime map and evaluating distance and orientation in the two ego and exo references.