

Minutes

e107, Tuesday 04 October 2011 - 12:46:10

--- MINUTES FROM THE *NIW* MEETING ---

12-13 JULY 2011

ISIR - Universit é Pierre et Marie Curie
Paris 6 - France
Room H20

Author: F. Fontana

JULY 12 - The meeting starts at 2.45pm

Participants:

UNIUD: F. Fontana

UNIVR:

McGill University: G. Millet, Sabrina Paneels

AAU: R. Nordahl, S. Serafin

INRIA: G. Cirio, L. Terziman, M. Marchal, A. L ècuyer

UPMC: V. Hayward, Y. Visell, A. Berrezag

The Coordinator opens the meeting.

2.50pm Management issues

- RN immediately abandons the meeting due to a stomach ache. Confined in his hotel, he will not join back until the end of the meeting.

- FF declares he will represent also UNIVR across the entire meeting

- VH points that, after a deeper inspection of the cost figures at UPMC, there is no need to prolong the project as foreseen in June. Pending no requests of amendment from the other participants, FF confirms that the third project period will end on Sep. 30, as initially contracted with the EC.

3.10pm Deliverables and reporting for the third period

- FF recalls the title and content of the deliverables for the third period. Then, he draws the attention on issues concerning the production of the periodic report and final report. In particular, the need to deliver all such documents in time is emphasized since, as opposed to past project periods, this year there will be a limited overtime (60 days, mandatory) to conclude all project activities once the third period is over.

- FF reminds to everybody that the most notable complain the reviewers made to the project after the end of the second period was about some lack of care in the design of the deliverables. On the contrary, this year the production of the open book (Del. 7.3) should prevent from complains like those occurred last year

- FF takes note also on the report about the distribution of the Community financial contribution between beneficiaries (within 30 days after the end of the period)

3.30pm Plans for the final review

- The Consortium agrees in bringing to Copenhagen as most prototypes as possible

- YV proposes to prepare a coherent, integrated presentation of the experiments made so far. Such a presentation should transmit the sense of shared activity that has characterized the project across all its development, in spite of the diverse components that the participants have carried on, individually or jointly

- FF emphasizes that all the themes that will be shared on the way toward the final review may aggregate the consortium around a project follow-up. He then launches a discussion around such themes

- A long discussion starts. In summary, VH and YV are in favor of a follow-up that should be firmly rooted around core scientific issues, including links with neuroscience or alternatively people working in research on nuclear energy, and whose applications may stem as possible outcomes of the mentioned core. Illusions in self motion may be one of these core issues. FF hypothesizes ways to motivate people to walk, including energy harvesting and the development of tools for "walking in the dark". AL is in partial favor of building a research platform based on the existing results in NIW, to develop novel HCI paradigms and scenarios. The application domain of rehabilitation seems at farther reach, unless a new strong participant enters the consortium bringing top-level expertise in the clinical field

- AL proposes the production of a movie, gathering together the most notable project achievements across the three years. Two options are proposed: commissioning the work to a professional or put a group of skilled students, such as those studying at AAU, in charge of making a semi-professional production with no direct costs for the project

- Two dates are finally proposed for the final review:

Oct. 27-28 (1st choice)

Oct. 20-21 (2nd choice)

5.15pm Technical presentations

Rafal Pijewski, a student working with VH, joins the meeting

UNIUD & UNIVR:

- FF first projects a web version of Dan Simmons' "Click" report of the BBC about FET2011 in Budapest which, among other things, cites work made by NIW; then, he illustrates how the active shoe prototype, now in final form, has reached complete autonomy from the host thanks to low-latency wireless transmission of the data and lightweight battery-powered amplifiers. Finally, he shows the output from an experiment where walkers' IOIs have been measured while displaying different feedbacks underfoot using the active shoes, aiming at assessing the significance of non visual feedback in influencing subjective gait patterns

- As significant figures have not been discovered in this experiment, AL suggests to measure a broader palette of diverse types of data to investigate this interesting scenario more in depth

INRIA

- LT shows experiments with "Shake your head", aiming at finding correct experimental scenarios to evaluate simulated walking tasks across virtual worlds
- LT illustrates plans for experimentation based on Visual King Kong effects
- GC reports on the vibrotactile rendering of fluids within different scenarios, including the sea shore of a beach where one can virtually walk over
- GC updates on advancement of the Magic Barrier Tape
- MM shows a video about Joyman, a previously presented human joystick interface allowing users to lean, when choosing a walking direction

UPMC

- YV confidentially illustrates evolved fracture models suitable for simulating materials composed of semi-elastic fibers
- FF comments on analogies with the crumpling model so far employed in the project, whose features may turn useful to enrich the new model
- VH reminds that the EU Flagship proposal entitled "robot companions" can be applied by every institution, that is willing to proactively contribute to the same proposal
- VH reports that at WorldHaptics 2011, recently held in Istanbul, a lot of demos were presented based on vibrotactile interfaces. In other words, NIW has anticipated by a couple of years this current leading trend in haptics, that replaces force with vibrotactile feedback
- VH presents results of an experiment showing that vibrotactile stimulation can enhance self-motion sensations, if frequency (not intensity) is abruptly changed during projections that convey strong visual cues of self motion
- VH and AB present new tiny actuators, that are quite efficient and active also in low-frequency in spite of their small size

AAU

- SS illustrates an experiment in which subjects balance on an instrumented wobble board, controlled using a 2D accelerometer and containing haptuators that provide audio-tactile sensations of a rolling ball traversing bumps and holes. The haptic modality, as opposed to other modality combinations, significantly affects the perception of different heights of the bumps and holes
- SS shows another experiment about blindfolded walking on a straight line using active shoes, in charge of providing vibrotactile cues of direction to walkers
- SS finally reports of an experience with interactive soundscapes, localizing virtual footstep sound sources controlled by the walking listeners' positions. The movement of the virtual positions of such walking sounds does not apparently create significant localization effects in walking listeners wandering around the room.

McGill

- GM shows advancements on variable-friction plate design, with related experiments of perceived floor resistance
- SP shows a gait adaptation experiment measuring diverse kinematic data produced by subjects walking over different types of multimodal virtual floors
- SP reports about improvements on sensation of sinking, by anticipating vibrotactile feedback before the contact with the ground through visual tracking of the feet position.

The meeting ends at 19.15pm

Social dinner.

JULY 13 - The meeting starts at 10.00am

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10.15am Conclusive plans for NIW Book

- FF diffuses the offer of Logos Verlag - Germany, for publishing the book with open content policy
- YV illustrates the latest list of contents
- YV proposes to enqueue a chapter on future trends
- YV will collect information on publishing fees and modalities by Springer Switzerland and Springer Series on Haptics
- The Consortium starts a broad discussion on the final title. Proposals are collected and discussed. The most shared titles seem to be "Walking with the senses" and "Perceptual techniques for walking in simulated environments", as well as a merge of the two
- The index is refined by the Consortium
- Final commitments are given to the respective chapter leaders
- FF proposes a firm deadline for YV and FF to receive the draft: august 15, 2011
- Possibilities for producing an index of terms and a unique list of citations are outlined.

The meeting closes at 12.00.

Lunch. The Consortium is looking forward to meet again in occasion of the final review meeting.