

IM2 Newsletter

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Event

IM2 Summer Institute 2010

September 13rd - 15th 2010,
Saanenmöser (Gstaad)

Special one day event dedicated to businesses on Tuesday September 14th

<http://www.im2.ch/summer-institute-2010>

Cover Story

Active participation of IM2 in a festival for children

HÉRISSON SOUS GAZON, JUNE 19, 2010, CHARRAT, VALAIS

Within the framework of the advancement of women in science and in collaboration with the project KIDSInfo, <http://www.kidsinfo.ch>, setup by the Swiss Association of Women Engineers (SVIN), IM2 had its own booth at the 2nd festival for children "Hérisson sous gazon" (<http://www.herisson-sous-gazon.ch>), June 19, 2010, in Charrat, Valais.



During a full day, the festival welcomed more than 1300 kids who had the chance to participate in 25 pedagogical, creative and/or fun workshops and 5 musical/artistic shows. This year, for the first time, IM2 joined the adventure by hosting a Science Discovery Workshop with the main objective to promote to young visitors, more specifically to young girls, the technical and scientific professions.

but, she was quickly interested in participating actively: "I didn't know what it was about, but electricity has always been a curiosity for me. As soon as I've seen that my system worked, I realized that it was not so difficult to turn on a bulb with a battery and few wires of copper. I'm looking forward in showing it to my parents and playing with them... ", she said.

To be continued on page 2

IM2 and KIDSInfo members, who have for their mission to strive to motivate young women to start or pursue a career in engineering, helped around 100 participants to build an electrical game that the kids were invited to take home with them.

The curiosity of the children has been triggered in a studious atmosphere. For example, Sarah, 9 years old, found out the workshop fortuitously



Active participation of IM2 in a festival for children (continued)

The NCCR IM2 and KIDSInfo hope to have fascinated a lot of children for science and arouse new future careers in engineering.

After this pretty good experience, IM2 has already submitted the idea to participate in the next event with a few other NCCRs, such as Affective Science, Frontiers in Genetics, MANEP, Climate, which have already shown a real interest.

A meeting with the five communication officers will be organized at the end of the year to consider the opportunity to setup a common participation in the 2011 edition of the festival.

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Completed Thesis, Guillaume Zufferey, EPFL

THE COMPLEMENTARITY OF TANGIBLE AND PAPER INTERFACES IN TABLETOP ENVIRONMENTS FOR COLLABORATIVE LEARNING

In CRAFT (EPFL), Guillaume Zufferey successfully defended his PhD thesis entitled "The Complementarity of Tangible and Paper Interfaces in Tabletop Environments for Collaborative Learning"

Abstract

This dissertation is interested in the complementarity of tangible and paper interfaces in tabletop environments. We introduce the concept of Tangible and Paper Environments (TaPEs) where Interactive Paper Forms (IPFs), a particular type of Paper User Interface (PUI) based on the paper form metaphor, are used as a complementary interface to a Tangible User Interface (TUI). We evaluate the potential of IPFs to overcome two main shortcomings of TUIs, in terms of scalability, due to the limited expressiveness of task-specific physical artifacts, and pedagogy, an issue raised by the lack of consistent evidence showing the benefits of the use of physical manipulatives in educational settings.

A TaPE, the Tinker Environment, has been developed with two logistics teachers in the context of the Swiss vocational training system. It consists of a warehouse physical small-scale model (TUI) and TinkerSheets, our implementation of IPFs. It aims at helping apprentices understand theoretical concepts presented at schools.

Three general research questions concern the respective affordances of paper and tangible components of TaPEs. A descriptive model is proposed, built around three interaction circles: individual (usability), group (collaboration) and context (integration). Results identify design guidelines that allow TaPEs

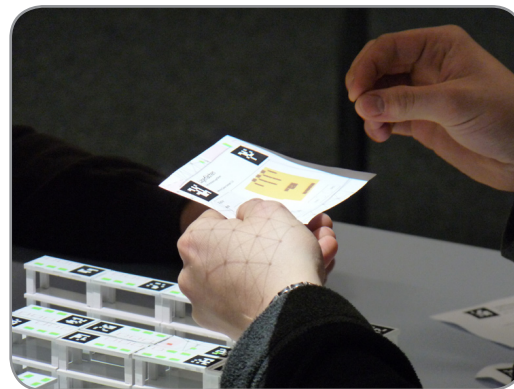
to overcome the scalability issue while supporting rich interactions (individual level). At the group level, observations show that the consistent physical interaction modality offered by TaPEs naturally supports collaborative interactions and that apprentices tend to take implicit roles based on their location around the system. At the context level, IPFs play the role of bridges between offline and online activities and contribute to a tight integration of the system in its context (i.e. a classroom).

Three specific research questions address the potential of the Tinker Environment in this pedagogical context and its appropriation by teachers. Observations show that the warehouse small-scale model

reduces the complexity of problems and allows apprentices to engage in meaningful problem-solving activities. Controlled experiments demonstrate that tangible artifacts lead to a higher learning gain and an increased performance in a problem-solving activity.

Collaboration quality and perceived playfulness are also improved. The teacher plays a central role in the use of the environment, guiding apprentices through activities and encouraging reflection during debriefing sessions. The design of IPFs, emphasizing either their interface or document nature, has a strong influence on their ability to support teachers.

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IM2 Summer Institute 2010

SEPTEMBER 13TH TO SEPTEMBER 15TH 2010, SAANENMÖSER

This year, the IM2 Summer Institute will be held at the GOLFHOTEL Les Hauts de Gstaad, in Saanenmöser from September 13th to September 15th 2010.

On Monday, the IP Heads will present the work achieved during the first year of phase III. Then, there are two sessions in parallel: one about FP7 projects (evaluations, services of Euresearch, consortium, Q&A) and a second session, specifically for PhD students (or PostDocs if interested), will give some tricks about efficient communication in presentations.

On Tuesday: Special event for business companies

A special one day event is dedicated to businesses on Tuesday September 14th. This is a unique opportunity to attend a technology transfer and networking event during this IM2 Summer Institute. The day will consist of a workshop about practical applications and collaboration. In the afternoon, the researchers will present their work during a poster session.

The companies will have the opportunity to meet and network with over 60 seniors, postDocs and graduate students of the IM2 project, and to hear about latest research and applications. If you are interested to participate, please contact valerie.devanthery@idiap.ch

On Wednesday, the participants will discuss about the problems of combining work and personal time as a researcher and share their own experience. This workshop will consist of analysis of real examples and scenarios (mentoring in the workplace, career advancement, and work with a new family), proposition of solutions, revisions, It will be followed in the afternoon by a panel discussion about "how to advance your career and have a personal life at the same time".

The registration or more information is available at:
<http://www.im2.ch/summer-institute-2010>

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Monday September 13 th	Tuesday September 14 th	Wednesday September 15 th
<p>09:30-11:30 Travel Arrival at the GOLFHOTEL Les Hauts de Gstaad, in Saanenmöser</p>	<p>SPECIAL DAY WITH THE PARTICIPATION OF INTERESTED COMPANIES</p>	<p>09:00 - 12:30 (K. Foster) Workshop on the maze of work and personal time <ul style="list-style-type: none"> • Analysis of real examples and scenarios (mentoring in the workplace, career advancement, and work with a new family) • Proposition of solutions • Revision of the solutions, ... </p>
<p>12:00-13:30 Lunch</p>	<p>09:00-12:30 (K. Foster) Workshop on practical application and collaboration <ul style="list-style-type: none"> • Technology transfer • Career relay race • Partnership </p>	<p>12:30-14:00 Lunch</p>
<p>13:30-14:00 (Hervé Bourlard & Katherine Foster) Welcome and introduction <ul style="list-style-type: none"> • IM2 overview • Objectives of the workshops on Tuesday and Wednesday </p>	<p>13:30-15:30 Poster session, networking - Plus coffee break</p>	<p>14:00 - 15:30 (Invited speakers) How to advance your career and have a personal life at the same time - An open discussion about people's career experiences. Speakers: Regine Duda [SNSF], Andrei Popescu-Belis [IDIAP], Jean-Philippe Thiran [EPFL], Anja Kunze & Dominique Zosso [EPFL] Moderator: Helene Füger [UniFR]</p>
<p>14:00 - 15:45 (IP Heads) Progress overview of Phase III - Year 1 <ul style="list-style-type: none"> • IP1: Integrated Multimodal Processing • IP2: Human centered design and evaluation • IP3: Social signal processing </p>	<p>15:40 - 16:00 Travel to "La Maison de l'Etivaz" Bus departure at 15:40 sharp</p>	<p>14:30 - 15:45 (H. Bourlard + K. Foster) Conclusion of the workshops and of the Summer Institute</p>
<p>15:45-16:00 Coffee break</p>	<p>16:00 - 18:00 PhD students session How to introduce in 1 minute who you are and what you do <ul style="list-style-type: none"> • How to do this and how to extend it to a longer presentation (a practical exercise) Speaker: Yves Germanier, [HEIG-VD]</p>	<p>16:00 - 18:30 Social Activity Visit of an Alpine cheese factory <ul style="list-style-type: none"> • Slide show about the cheese making process • Tour of the cheese factory (different cellars) • Wine and cheese tasting (with the possibility to buy some at the end of the tour) Website: http://www.etivaz.ch</p>
<p>16:00-18:00 All except PhD Panel discussion about FP7 projects <ul style="list-style-type: none"> • Introduction, roundtable, objectives of the participants • Processes, time line, role, and criteria of the evaluation in FP7 • The experience of a FP7 evaluator, working charge and remuneration of an expert for Research Activities • Services of Euresearch: partners searching, networking, project resubmission, proposal pre-screening, high-potential visits • Building a consortium, the experience of a FP7 researcher • Open discussion Speakers: Patrick Furrer [Euresearch], Nadia Khaled [EPFL], Touradj Ebrahimi [EPFL], Sébastien Marcel [IDIAP]</p>	<p>16:00 - 18:30 Social Activity Visit of an Alpine cheese factory <ul style="list-style-type: none"> • Slide show about the cheese making process • Tour of the cheese factory (different cellars) • Wine and cheese tasting (with the possibility to buy some at the end of the tour) Website: http://www.etivaz.ch</p>	<p>16:00 End of Summer Institute Travel back home</p>
<p>19:00 Dinner</p>	<p>19:15 Dinner</p>	

News

UniGe is organizing the affect task in MediaEval benchmarking forum

MediaEval, October 24, 2010 in Pisa, Italy at Santa Croce de Fossabanda



MediaEval

MediaEval is a benchmark evaluation sponsored by the PetaMedia Network of Excellence, <http://www.petamedia.eu>. The IM2 project is a partner of PetaMedia and the University of Geneva (member of IM2) is organizing the affect task in this benchmarking forum.

This forum is a continuation and expansion of VideoCLEF. In 2010, the following tasks were being offered:

- the tagging task: prediction of semantic theme,
- the tagging task (Wild Wild Web version): prediction of user tags,
- the placing task: geo-tagging,
- the affect task: boredom detection,
- the passage task: passage-level video retrieval, and
- the linking task: linking videos in Dutch language to Wikipedia pages in English.

So far, the development and evaluation sets are released for all the tasks. The submissions of the runs are due on August 5th. The results and working notes will be presented in the MediaEval workshop which will be held on Sunday, October 24, 2010 in Pisa, Italy at Santa Croce de Fossabanda, a medieval convent.

There is still an open call for the next year's tasks. If you are interested in running a new task for the MediaEval 2011 you can submit and present your proposal in the "Brave New Tasks" track of the workshop.

For more information please consult the website <http://www.multimediaeval.org>

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IM2 members part of steering committees

Stéphane Marchand-Maillet

(deputy head of IM2.IP1 on Integrated Multimodal Processing), as general co-chair of the successful ACM-CIVR2009 (with Dr. Y. Kompatsiaris, ITI, Greece) is now part of the steering committee of the ACM International Conference on Multimedia Retrieval (ICMR) for a 4-year term.

The role of the steering committee members includes selecting the future locations of ICMR, serving occasionally as a "Shepherd" for a future chair, and helping to actively publicize ICMR to the community.

ICMR is a merger of the International Conference on Image and Video Retrieval and the Multimedia Information Retrieval series. ICMR, a fully sponsored ACM conference, exists primarily to illuminate the state of the art in multimedia retrieval for both researchers and practitioners. ICMR intends to become the major international forum for Multimedia Information Retrieval researchers.

The first edition of the ICMR will be held in Trento, Italy, in April 17-20 2011. More information is available at:

<http://www.icmr2011.org> and
http://vipr.unige.ch/doku.php/team:stephane_marchandmaillet

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Hervé Boulard

is guest editor of 3 IEEE publications:

- IEEE Journal of Selected Topics in Signal Processing (J-STSP) on "Signal and Information Processing for Social Network", in preparation.
- IEEE Signal Processing Magazine, Special Issue on "Mobile Media Search", in preparation.
- IEEE Signal Processing Magazine, Special Issue on "Signal and Information Processing for Social Learning and Networking", in preparation.

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Selected publications

Modelling human perception of static facial expressions.

M. Sorci, G. Antonini, J. Cruz Mota, T. Robin, M. Bierlaire and J.-Ph. Thiran
In Image and Vision Computing, Vol. 28, Nr. 5, pp. 790-806, 2010.

Description Languages for Multimodal Interaction: a Set of Guidelines.

B. Dumas, D. Lalanne and R. Ingold
In Journal on Multimodal User Interfaces: «Special Issue on The Challenges of Engineering Multimodal Interaction», Springer Verlag, vol. 3, 2009, pp. 237-247.

Geotag Propagation in Social Networks Based on User Trust Model.

I. Ivanov, P. Vajda, J.-S. Lee, L. Goldmann and T. Ebrahimi
In Multimedia Tools and Applications (Springer), Special Issue on Social Mining and Search, 2010.

A Random Walk Framework to Compute Textual Semantic Similarity: a Unified Model for Three Benchmark Tasks.

M. Yazdani and A. Popescu-Belis
In the Proceedings of IEEE ICSC 2010 (4th IEEE International Conference on Semantic Computing), Pittsburgh, PA.

Knowledge interdependence with the partner, accuracy of mutual knowledge model and computer-supported collaborative learning.

G. Molinari, M. Sangin, P. Dillenbourg, and M-A. Nüssli
In European Journal of Psychology of Education, XXIV (2), pp. 129-144.

No Dead End: a Stochastic Pedestrian Motion Model.

S. Pellegrini, A. Ess, M. Tanaskovic, L. Van Gool and W. Turn
In Proc. of the International Workshop on Socially Intelligent Surveillance and Monitoring (SISM), San Francisco, USA, June 14th, 2010.

More Than Words: Inference of Socially Relevant Information From Nonverbal Vocal Cues in Speech.

A. Vinciarelli, G. Mohammadi, H. Salamin and K. Truong
In the Proceedings of the COST 2102 Training Event, LNCS (Springer).