

The (IM)2 Newsletter

Every month the (IM)2 Newsletter brings you the latest and hottest scientific and administrative news about the (IM)2 NCCR and related topics

The second year in review

On the basis of the annual progress report and the site visit which took place late October in Martigny, the Review Panel (appointed by SNSF) has provided feedback on the achievements of the NCCR.

The Review Panel acknowledges "many more interactions [were] visible between the different IPs" ... "Building up on the previous work of the groups, the NCCR can show a commendable list of scientific publications after a relatively short time. The high outside recognition and the list of awards are a good sign of the positive achievements of IM2. The prominent presence of the NCCR at ICASSP '03 with a special session on meeting processing and IM2's representation through 5% of all papers at ASRU also attest to the quality of the research." ... "The successful cross-leveraging of complementary projects within CTI (...), EU Framework Programme (...) is impressive."

The report also contains positive feedback and further suggestions about knowledge and technology transfer, education and training, advancement of women, and various management issues. The full report is available from the local web pages.

Next year's report and site visit will cover the full 3 year period (2002–2004), address each IP in greater detail, and serve as a significant indication for the continuation of the NCCR after 2005.

Spring School on Multimodal and Mobile Interfaces

The Spring School of the "3e cycle romand d'informatique" will be held from March 1st to 5th, 2004, in Anzère, www.anzere.ch, a mid-size ski resort located North of Sion (VS). The event is entitled "Multimodal and Mobile Interfaces" and covers several hot topics related with (IM)2. Lectures will be given by four internationally renowned scientists: Prof. Wolfgang Wahlster, DFKI, Saarbrücken, Dr. Brygg Ullmer, MIT/MediaLab, currently at Zuse Institute Berlin, Prof. Johanna Moore, Univ. of Edinburgh, and Prof. Michel Beaudouin-Lafon, Univ. of Paris-Sud.

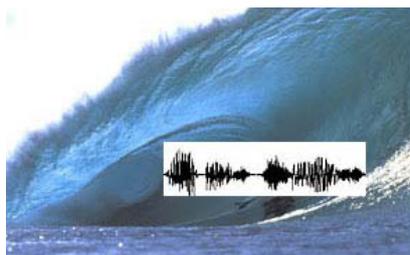
Most Participants will be computer scientists from Swiss Universities (professors, post-docs, PhD students) or members of (IM)2. Course sessions will take place from 08:30 to 12:00 and from 16:30 to 20:00; the

afternoon break is free and will be used for additional informal discussions, as well as for social and sport activities. Detailed information and on-line registration is available at diuf.unifr.ch/diva/springschool04.

Lectures by Masters in Speech Processing

Prof. Hervé Boudlard and Prof. Hynek Hermansky have been invited to present their recent work at the "Special Workshop in Maui (SWIM): Lectures by Masters in Speech Processing" (dspincars.sdsu.edu/swim/) to take place in Maui Prince Hotel and Resort on January 12-14, 2004, and organized by The Center for Integrated Acoustic Information Research (CIAIR) at Nagoya University (Japan) in cooperation with the IEEE Signal Processing Society.

Hervé Boudlard (with Iain McCowan, Daniel Gatica-Perez, Samy Bengio and Darren Moore) will have a presentation on "Modeling human interaction in meetings based on audio and visual information" and Hynek Hermansky (with Hervé Boudlard) will present recent work on "Some emerging concepts in automatic recognition of speech".



The SWIM workshop: surfing the waves in Maui.

Most downloaded papers

In last November's issue (19), we had the pleasure to report on Pierre Wellner's «Lasting Impact Paper Award». We are equally proud to report that several of our papers appear among the most downloaded papers, according to the lists maintained by Elsevier/ComputerScience for their journal websites.

Pattern Recognition

7: Beat Fasel and Jurgen Luetttin, «Automatic facial expression analysis: a survey»,

Pattern Recognition, 36 (2003)

Beat, a former IDIAP PhD student, is now a PostDoc at ETHZ with Prof. Luc Van Gool, (IM)2.SA.

Full list at www.elsevier.nl/locate/patcog.

Speech Communication

19: Jitendra Ajmera, Iain McCowan and Hervé Boudlard, «Speech/music segmentation using entropy and dynamism features in a HMM classification framework», Speech Communication, 40 (2003) 351-363

23: Hemant Misra, Shajith Iqbal and B. Yegnanarayana, «Speaker-specific mapping for text-independent speaker recognition», Speech Communication, 39 (2003) 301-310

25: Naren Malayath and Hynek Hermansky, «Data-driven spectral basis functions for automatic speech recognition», Speech Communication, 40 (2003) 449-466

Full list at www.elsevier.nl/locate/specom.

Events

Multimodal Technologies 05.02.04

SCSC'04, the Swiss Computer Science Conference, will be held on February 5, 2004 in Bern. The central theme this year is Multimodal Technologies, and features talks by (IM)2 researchers B. Pfister (ETHZ), P. Wellner (IDIAP), M. Rajman (EPFL), and R. Ingold (UniFR). More information at scsc04.vptt.ch.

Spring school 01–05.03.04

See details in this edition.

Joint (IM)2-AMI-PASCAL Workshop 21–25.06.04

The 2004 (IM)2 workshop will be organised as part of a one-week event in multimodal processing, which will also see the active participation of researchers from the European AMI Integrated Project and PASCAL Network of Excellence. The workshop will also feature several invited keynote speakers.

Full details of the program, including days reserved for tutorials, presentations and board meetings will be announced later, but you can already book this week for an important event in Martigny.

A new corpus of meetings in the IDIAP Smart Meeting Room

After extensive collaboration and discussion amongst IM2 partners, a team has started collecting a new corpus of meetings in the IDIAP Smart Meeting Room. The team at IDIAP includes Iain McCowan, Daniel Gatica-Perez, and Samy Bengio as researchers, Joanne Moore as the corpus administrator, and Olivier Masson, Thierry Collado, and Frank Formaz as support engineers. In addition, many staff members at IDIAP will collaborate as meeting participants. This initiative follows an earlier data collection effort, which resulted in a corpus of sixty short five minute meetings. The new corpus endeavours to record up to two hundred meetings, of up to one hour long.

Some of the specific motivations for collecting the new corpus of meetings include the need for more natural data to facilitate richer research tasks, and the need for a larger corpus to improve the statistical significance of results.

The meetings in the corpus will be based on specific scenarios (see examples below) designed to encourage natural behaviour, as opposed to the more tightly scripted approach taken previously. In addition, the new corpus will endeavour to make more use of the visual modality, and will contain additional data streams from several new devices.



Meeting Scenarios

Scenarios are outlined to meeting participants before a meeting, to inform them about the context and purpose of the meeting. Some scenarios correspond to real meetings (i.e., meetings that normally occur at IDIAP). Other scenarios correspond to artificial meetings, that is, meetings created on purpose but where each participant acts naturally as herself/himself. In the following, we list a few illustrative examples of meeting scenarios that will be recorded.

Book club

Groups of People will meet in book clubs where they decide on a common (non technical) book, read it in their spare time, and meet to discuss it. Meetings will probably occur every two weeks or month.

Technical reading group

Staff members will get together to decide on organising a reading group on a technical theme of common interest. They will review and discuss relevant papers on the field, every one or two weeks, for a number of weeks.

Presentation rehearsals

Students and/or researchers will rehearse a presentation in front of 3 or 4 people. There will be discussion after (and/or) before.

Course Design

Research staff will meet to propose a course to be taught to PhD students at IDIAP. This will involve a series of meetings ranging from preliminary brainstorming, through to final decision making.

Other scenarios

The above list is not exhaustive, and new scenarios will be proposed as the data collection unfolds. Other IM2 research partners are encouraged to propose scenarios that they would like included in the corpus to ensure that the data caters for as many research requirements as possible.

New devices/ upgrades to the Smart Meeting Room

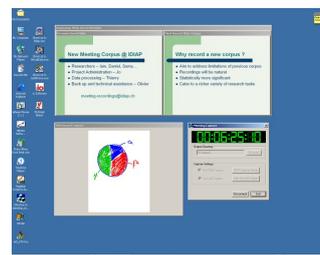
Several upgrades and additions have been made to the Smart Meeting Room in time for the recording of the new corpus. These include automatic whiteboard and slide capture, along with handwritten data captured using Logitech io pens.

Synchronised whiteboard activity capture

Whiteboard pen strokes are acquired using a commercial whiteboard capture hardware system (eBeam). Custom PC software collects the pen strokes and timestamps each point with the global meeting timecode. Timestamped whiteboard data is then output in an XML file format.

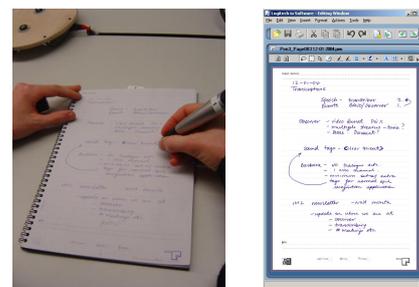
Synchronised Slide capture

The hi-res VGA output of the data projector is input to a capture card on a PC. The PC performs real-time slide change detection, timestamps unique slides with the global meeting room timecode and saves the slides in JPEG format. The slide capture system is independent of meeting participants' laptops and presentation software, and captures presentation slides at native VGA resolutions.



Logitech pens

Five Logitech io pens have been installed into the meeting room to digitally capture handwriting. The pens capture each individual pen stroke and are time stamped so that the information can be synchronised with other data collected. Data is downloaded from each pen using the Logitech software and converted to XML file format.



Please be involved!

We would like to encourage people from all IM2 partners to provide feedback on the corpus collection process, and to be involved in specifying scenarios and participating in the meetings. More details on the data collection are available in communication report COM 03-10 "Meeting Data Collection Specifications", which can be downloaded from IDIAP's online publications. If you would like to record your own meetings in the meeting room facilities, the procedure is very easy. Please email the project team (meeting-recordings@idiap.ch) for details.