

# AMI Newsletter

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## News

2005-12-16

### MLMI'06

#### REMINDER AND CALL FOR PAPERS

The 3rd Joint Workshop on Multimodal Interaction and Related Machine Learning Algorithms (MLMI'06), jointly sponsored by AMI, Swiss NSF, and several other related EU projects will be held in Washington DC, USA, 1-3 May 2006.

**Submission of full papers:**  
**17 February 2006**

**Additional information:**  
<http://groups.inf.ed.ac.uk/mlmi06>

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## ONGOING TECHNOLOGY TRANSFER ACTIVITIES

### Overview

As we begin the third year of the AMI project, we are at the cusp of a new phase where we widely publicize our achievements to date and significantly increase the activities to promote potential transfers of technology developed as part of the project. Technology transfer is not a rapid or simple process. It requires the participation and contributions of the scientific community and the interest of the business community.

In the fall of 2005, the AMI Technology Transfer WP (WP9) initiated numerous activities to be fully deployed in 2006. This started by setting up an internal AMI Technology Transfer (TT) Wiki server dedicated to sharing with project members the progress of technology transfer initiatives. This TT Wiki currently points to the following active projects:

- Standard Marketing Communications: an improved web site for the project, a standard presentation for use when speaking about AMI with press/journalists and other target audiences, and some pre-approved quotes
- Electronic Communications: an interactive multimedia brochure available for multiple venues and audiences.
- Wainhouse Research European Forum2006: an international industry event sponsored by AMI, being held April 19, 20 and 21, 2006 in Berlin, Germany.
- AMI at Cebit : planning for the AMI project's participation in the Future Pavilion at CeBIT in Hannover March 9 to 15, 2006.
- Future of Meetings: a set of presentations and papers offering the AMI vision in order to develop markets and solicit involvement of other research and business communities.
- Market Research 2006: a survey of potential users and licensees to be conducted in conjunction with Wainhouse Research European Forum and perhaps with other groups.

The AMI Project also communicates with industrial partners directly, according to areas of expressed interest, by way of the Industrial Advisory Board and the AMI Community of Interest. The AMI Community of Interest currently includes 14 companies who share the AMI project's objective to increase the impact of technology on human-human communications in cost effective, unobtrusive and productivity enhancing manners.

The culmination of some of these activities will be our participation in CeBIT 2006 and the Wainhouse Research European Forum (see page 4 for further information).

### Intellectual Properties

As part of the WP9 (TT) deliverables a report (D9.3) on the AMI intellectual property policies was prepared. In parallel, a survey of the technologies used and under development was performed. The survey revealed that the AMI project work can be organized into four categories. The basic technologies form the core or nucleus of the assets. They include the contributions of AMI project members from previous research as well as newly developed software (e.g., speech recognizers, keyword spotting algorithms, visual and multimodal tracking and pattern recognition techniques and visualization systems, the application and JFerret plugins). There is the AMI Multimodal meeting database and related know-how and infrastructure, such as the Multimedia file servers. Annotation schemes and tools such as NXT, NITE and TORCH form another category while demonstrators, both software and hardware, such as the Wireless Presentation System and portable meeting recorder, are the vehicles by which we can show the applications for the core technologies. The key technologies and assets survey will be maintained by the TT team with the assistance of Jean Carletta.

*To be continued on page 3*

Cover Story

## The University of Edinburgh



The AMI team at The University of Edinburgh is led by Steve Renals and consists of members of the Centre for Speech Technology Research (CSTR) and the Human Communication Research Centre (HCRC). CSTR is an interdisciplinary research centre linking The School of Informatics with Theoretical and Applied

Linguistics and is concerned with research in all areas of speech technology including speech recognition, speech synthesis, speech signal processing, information access, multimodal interfaces and dialogue systems. HCRC brings together researchers from several formal and experimental disciplines, including linguistics, psychology, cognitive science, and computer science, to understand better how people communicate. HCRC's work spans spoken and written language as well as communication in other media - visual, graphical and computer-based.

Edinburgh serves as the financial coordinator for AMI and has one of the instrumented meeting rooms used to record the corpus that underpins the project's research and development. Edinburgh has also co-ordinated annotation of the data for a wide range of linguistic and behavioural properties and the development of infrastructure for creating and sharing the annotations. Our research team is drawn from across the project disciplines.

From left to right, Weiquin Xu (dialogue structure, chunking); Jonathan Kilgour (infrastructure for working with annotations); Gabriel Murray (summarization); Mike Lincoln (microphone array processing); Steve Renals (project manager); Beata Kouchnir (annotation) Jean Carletta (turn-taking, dialogue structure);

Caroline Hastings (administration); Alfred Dielmann (multimodal analysis using dynamic Bayesian networks); Giulia Garau (adaptation techniques for speech recognition); Maria-Luisa Flecha-Garcia (annotation); Melissa Kronenthal (data collection); and Sabrina Hsueh (topic segmentation). Johanna Moore, who is not shown, oversees our work on the computational modelling of linguistic and semantic structures.



The University of Edinburgh was founded in 1582 and has buildings throughout Scotland's capital city, which is located in southeast of the country on the Firth of Forth. The city is dominated by a 15th century castle perched on top of an extinct volcano overlooking the city. Edinburgh hosts the best New Year's celebrations in the world and an arts festival every August which brings hundreds of thousands of visitors into the city.

On the web: <http://www.ed.ac.uk/>

## Spiderphone SA



**Who said that? Who is listening?  
Who just hung up or joined?  
If you're using Spiderphone you know.**

Spiderphone SA

Spiderphone SA is a Swiss startup founded in July 2003 as a partnership between Spiderphone.com, Inc. in New York, and the IDIAP Research Institute in Martigny. The company has developed a web-enhanced telephone conference service that works over ordinary phone lines, but adds a simple-to-use web interface that gives participants full control over their calls. Use of the web is optional. Participants who use the web see up-to-the-moment status, control each line of the call, and see the name of the current talker in real-time. The web-enhanced service also provides file and web page sharing, integrated private chat, synchronized PowerPoint presentation display, as well as recording and playback features. The service is fully automated, but provides features similar to operator-assisted offerings.

been developed to display speaker segmentations in real-time as the conference call progresses. Next year, Spiderphone plans to actively participate in the design and prototyping of Remote Meeting Assistant applications.

### Spiderphone in AMI

Spiderphone constitutes 1% of the AMI project, with its primary contributions focused on the infrastructure and HCI work-packages. Thanks to AMI, the company has been able to adapt its telephone conference bridge technology to European digital telephony circuits, and to add experimental support for VoIP connections that provide integration of AMI technology with telephone conference calls. Recordings of Spiderphone conference calls can be browsed with the AMI JFerret meeting browser, and JFerret plug-ins have



<http://www.spiderphone.ch>

## ONGOING TECHNOLOGY TRANSFER ACTIVITIES

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### AMI Vision Video and Interactive Brochure

While the AMI project ties together all these technologies, demonstrators and know-how into a well focused research unit, the person who is hearing and learning about the assets and research for the first time needs to see how they work together or apart in the context of meetings. A visual and compelling story depicting the use of AMI enhanced meeting systems by an architectural firm in 2009 has been developed. Based on the script, a 5 minute video illustrating the challenges and the value of the AMI technologies is currently being produced by professionals (and is expected to be ready at the last for CeBIT). The linear video can be used in many situations. A version will be adapted for catching people's attention in the CeBIT booth. Another version will be incorporated into the AMI general presentation. In addition, this video will become the interface for an interactive brochure (published on CD in March 2006) and will be on the AMI project web site in streaming format. At numerous points in the story where AMI technology is shown at work in simulation, the viewer will have the opportunity to pause the main story and learn more about a specific research and development topic. In the "branches" of the story, there will be opportunities to hear an interview with a scientist, read a paper or see a clip showing the effects of a technology, such as annotation or 3D visualization.

### AMI General Presentation and Web Site

While a catchy video and multimedia brochure are valuable to provide those who are unfamiliar with AMI a complete catalog and vision, we keep developing and maintaining more basic communications tools. The project partners and those who will present on its behalf need to have consistent answers to basic questions such as: What is the AMI project about? How will it

contribute to an improvement in business productivity while at the same time further research in the field of multimodal communications? A generic presentation describing the project's goals and approach to the problems is being prepared. When completed, AMI partners will be able to use the "standard" slides and to customize them for their unique audiences, or use in their original form. In parallel with the preparation of the presentation, the same or similar information will be made available on the AMI web site. A complete review of the web site and a plan for its update will be executed in early 2006.

### Technology Transfer Panel

Technology transfer involves all the AMI partners. Under the initiative of Christine Perey, WP9 has thus set up a panel of AMI experts collaborating on the deliverables and output of the various initiatives. Many of the people on the panel, such as Iddo Bante of University of Twente, Christian Hackl of Technology University of Munich, Honza Cernocky of Brno University of Technology and Mark Ruijsendaal, Business Development Director at TNO, will be using the presentation materials and helping to raise awareness about the AMI project in their geographies and communities of specialty. The panel will use project meeting tools such as Spiderphone and Visual Nexus to meet regularly without need for travel. In addition, these panel members will serve as advocates for rich meeting technology usage in their respective institutions as part of the AMI project. By having greater exposure to and being more familiar with the technologies we are developing, technology transfer will be more effective in the long run.

## AMI and Remote Meeting Assistant

In addition to the ongoing Meeting Browser activities, which started at the beginning of the AMI project, AMI partners are expanding their focus to include the subject of a Remote Meeting Assistant (RMA).

A Remote Meeting Assistant could assist people who are not present at the location of a group meeting yet who wish to monitor the meeting's progress or contents. The remote meeting assistant could alert (using visual, auditory signals) the user when certain keywords (based on automatic meta-data recognition) are spoken or when a particular meeting participant speaks during a meeting (speaker localization). The parameters of interest to the RMA user could be defined by the user in a variety of ways.

Partners working on the Remote Meeting Assistant component of the AMI project during 2005 will:

1. Identify a few (considered the most important) features on which the Remote Meeting Assistant can base its alerting system. The two clearest features identified so far are:
  - Real time speaker localization (based on microphone array)
  - Keyword (meta data) spottingOthers (such as face tracking) could also be considered.
2. Based on the highest priority features, a mock up<sup>1</sup> will be developed to show the concept of the RMA's features.
3. The AMI project will, using the mock-up, validate that the features it has determined are most important, are, in fact, usable and have the potential to be profitable (exploitation

opportunity) to the larger community of interest.

4. Integration of the selected features in a real time system, probably between one meeting room and one remote participant.
5. Develop definitions for key concepts and terms used in the project. Terms to be defined include: monitoring, annotations (beyond keywords), buffer, alerting, summary of meeting, etc.

The ultimate goal of the RMA component of the AMI project is to have an architecture into which new features can be introduced like monitoring, alerting and participating from a remote location. However, the AMI project will only focus on a few features to prove that the Remote Meeting Monitoring and Alerting technology is useful.

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<sup>1</sup>The first mock-up /demonstration of the Remote Meeting Assistant will alert the user when something of interest happens in a meeting in a Smart Meeting Room (based on the annotated archives in the AMI database). It will be followed by work on new software, which will take existing archives (any meeting in the AMI database) and send alerts when keywords are detected out to a RMA client in real time. This essentially permits work on the RMA to begin in parallel with and before the completion of a real time Smart Meeting Room meeting annotation system.

## News and Upcoming Events

### CeBIT 2006 *March 9-15, 2006*

#### AMI Project will be exhibiting and speaking at CeBIT 2006

As a result of the German Ministry of Education and Research's (BMBF) generous offer to host the Human Computer Interaction Special Exhibition, the AMI project will have a significant presence for technology transfer at the world's largest technology fair, CeBIT, in Hanover from March 9 to 15, 2006.

We believe it is important to participate in CeBIT because it is an event with broad appeal, especially in consumer technologies.

The goals for the project's participation include to:

- meet with many press/journalists who cover future technologies seen at CeBIT. The objective of meeting with journalists is to encourage them to write about the AMI project and its impact on the future.
- arrange meetings with companies who are also exhibiting at CeBIT and who could be interested in seeing a demonstration of AMI technology for potentially using in their future products. We will carefully review the list of 2005 exhibitors and base some invitations to briefings on that list.
- show the general public the type of research that the AMI project is performing and how it could change their lives.

In addition to having a public stand where we can demonstrate AMI prototypes and demonstrators, we will have an opportunity to make a presentation in the future technology track (conference). This will be the Future Talk Forum for which Reinhard Karger, DFKI, is chairman. We will make a presentation about the future of meetings.

### Wainhouse Research European Forum

April 19-21, 2006

#### AMI Project is the Diamond Sponsor of the Wainhouse Research European Forum

Wainhouse Research and AMI are pleased to invite our partners, customers, future collaborators and fellow advocates for the advancement of meeting technologies to the Wainhouse Research European Forum 2006 in Berlin Germany on April 19, 20 and 21, 2006. This will be an excellent opportunity to meet, to learn from and be inspired by those in business who are forging the future of meetings, e-learning and new business trends.

The 2006 event follows on the success of the 2005 Wainhouse Research event and will focus on next-generation technologies for meeting as well as current trends in enterprise collaboration deployments. The AMI project will have demonstrations in the technology showcase on the first and second evenings. We will also be co-sponsors, with Microsoft, of the all conference banquet on April 20, 2006. There will be many presentations about AMI research and technologies during the day of the conference dedicated to next generation meeting technologies.

In addition to meetings with companies interested in our research, we will have the AMI interactive/electronic brochure on mini-CDs to distribute to all attendees.

For more information, visit <http://www.wainhouse.com/berlin>

### Success of BUT Speech@FIT group in automatic language identification

The Speech@FIT group from Brno University of Technology (AMI partner) recorded an important success in the past weeks. In NIST-evaluations NIST-LRE-2005, their system for automatic language identification (LID) scored the second in the primary condition (30 second speech segments) and the best in two secondary conditions (10s and 3s) in tough competition of 12 academic and industrial laboratories from all over the world. Within AMI, the LID can be used for example to detect the language of back-channel speech in meetings and routing it to appropriate speech recognizer. Security is another main application domain for LID.

### IDIAP finalist for Swiss Technology Award

IDIAP has recently been shortlisted for the Swiss Technology Award. The mission of the selection committee, composed of most of the Swiss States, several Federal Offices, and well known representatives of the industrial and financial sectors, is to identify the most innovative projects, with the highest commercial potential.

Among the selected projects, the IDIAP «Bio Login» biometric identific authentication system has been invited by OSEC (Swiss Office for Commercial Expansion) to be demonstrated as part of the Swiss Pavillon at the upcoming CeBIT in Hannover, March 9-15, 2006.

For more information, please contact Frank Crittin. [frank.crittin@idiap.ch](mailto:frank.crittin@idiap.ch).

## The AMI Team wishes you a Merry Christmas and a Happy New Year

