

SNAPSHOT at Seminar on Adapting Communications Tools for People with Special Need

The Seminar on Adapting Communications Tools for People with Special Needs took place at Zaragoza, Spain, in February 2015,



with around 200 participants.

From the feedback received from the participants, the adherence to the event was justified by their need to access discussion (cont. on page 2)

IRIS team from Microsoft welcomed the Academia ISCTE (Lisbon University Institute) on the 1st of April. Thirty students from High Schools in Lisbon, Portugal were at Microsoft in order to be introduced to the development of various technological devices, including the human-computer interaction platform developed in the scope of IRIS.



IRIS

TOWARDS NATURAL INTERACTION AND COMMUNICATION

1 YEAR OF PROJECT

LIFE. Despite its infancy, it reached considerable scientific marks, corresponding to 29 research and technological papers.

The strong and adequate contribution from all partners has been decisive to this recognition and opportunities to go out of the lab. Looking at the recent feedback from the attendees at the Seminar on Adapting Communications Tools for People with Special Needs, it may do just that, as IRIS and its human computer interaction platform adapted to all users was very warmly welcomed by therapists, users with special needs and their families.

For further information about the project visit the new webpage:

<http://www.iris-interaction.eu/>

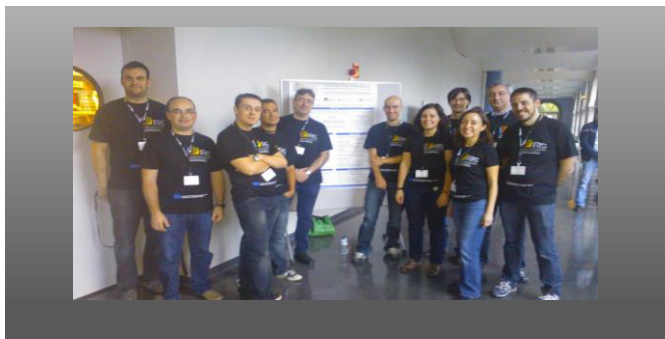
NewsFlash

IBERSPEECH 2014

<http://iberspeech2014.ulpgc.es/>

The VIII Jornadas en Tecnologías del Habla and the IV Iberian SLTech Workshop (IberSpeech) were held on November 19-21, 2014 in Las Palmas de Gran Canarias, Spain.

IRIS team was strongly represented in the event, sharing with the scientific community the following research work: **Confidence Measures in Automatic Speech Recognition Systems for Error Detection in Restricted Domains** by Julia Olcoz, Alfonso Ortega, Antonio Miguel, Eduardo Lleida; **Unsupervised Accent Modeling for Language Identification** by David Martínez González, Jesús Villalba López, Eduardo Lleida Solano, Alfonso Ortega Gimenez; **Articulatory Feature Extraction from Voice and Their Impact on Hybrid Acoustic Models** by Jorge Lombart, Antonio Miguel, Eduardo Lleida; **A Preliminary Study of Acoustic Events Classification with Factor Analysis in Meeting Rooms** by Diego Castán, Alfonso Ortega, Antonio Miguel, Eduardo Lleida; **Unsupervised Training of PLDA with Variational Bayes** by Jesús Villalba, Eduardo Lleida; **Quantitative Analysis of /I/ Production from RT-MRI: First Results** by Samuel Silva, Paula Martins, Catarina Oliveira, António Teixeira; **Ensemble model adaptation for different scenarios in speaker verification** by Leibny Paola García-Perera, Juan Arturo Nolzaco Flores, and Eduardo Lleida; **Albayzin 2014 search on speech @ ViVoLab UZ** by Antonio Miguel, Julia Olcoz, Jesús Villalba, Alfonso Ortega and Eduardo Lleida; **Subtitling Tools Based on Automatic Speech Recognition** by Adolfo Arguedas, José Enrique García, Eduardo Lleida, Alfonso Ortega, Antonio Miguel; **The IRIS Project: A Liaison between Industry and Academia towards Natural Multimodal Communication** by João Freitas, Sara Candeias, Miguel S Dias, Eduardo Lleida, Alfonso Ortega, António Teixeira, Samuel Silva, Cengiz Acarturk, Verónica Orvalho (this last one authored by all project partners).



on technology trends and challenges in the alternative communication sector, and research on deployment strategies for improving the life of people with special needs was faced as an endeavor. The Keynote speakers were Eduardo Lleida, from University of



Zaragoza, Spain, Sara Candeias, from Microsoft, Portugal, Marc Coronas Puig-Pallarols, from



University of Barcelona, Spain, Manuel Gimeno García, from Fundación Orange, Cla-

ra Delgado Santos, from Centro de Referencia Estatal de Autonomía Personal y Ayudas Técnicas, and José Manuel Marcos Rodrigo and David Romero Cabral, from CPEE Alborada, Zaragoza-Spain, covering the topics of augmentative communication, technology and techniques to improve the communication. Presentations also covered real experiences, challenges and visions for new projects. One of the talks presented the IRIS project, its goals, scientific competencies and work status.

The event was sponsored by IRIS.

ON THE LIGHT WORK SESSIONS

On 15 January, new work presentations have been performed at Microsoft in Lisbon providing a sample of the

work developed at IRIS in the fields of Permanent Magnetic Articulography based Assistive Speech Technology and Eye tracking: State of the art and future prospects. (continued on next page)

These presentations reported the investigation performed by **Prof James Gilbert** (from the University of Hull, England) and **Prof Cengiz Acarturk** (Middle East Technical University, Turkey), respectively.

In the same month of January, a new solution for the **Automatic Assessment of the Children Reading Performance** was presented by **Jorge Proença**. Jorge Proença is a PhD student of Electrical and Computer Engineering in the

University of Coimbra, Portugal a FCT fellow and he is supervised by Sara Candeias, from MLDC team.

Language is a way of natural communication, even it is written or has the form of speech. In the scope of IRIS, language processing is on the focus of the team work either to generate sentences automatically from pictograms, adapting communication to users with special needs, or simple to extract pertinent

data from text in information accessing e-services. We took the chance of having **Prof Luísa Coheur**, from Instituto Superior Técnico (IST)/University of Lisbon, Portugal visiting MLDC during April and we had **A taste of Natural Language Processing**.

The key-features of those work sessions was their practical components: experts and participants shared research experiences and new ideas to implement.

Best Paper Award

The papers "Improving Speech Recognition through Automatic Selection of Age Group Specific Acoustic Models" and "Automatically Recognising European Portuguese Children's Speech: Pronunciation Patterns Revealed by an Analysis of ASR Errors" by A.Hamalainen, H.Meinedo, M.Tjalve, T.Pellegrini, I.Trancoso, M.S. Dias and A.Hamalainen, H.Cho, S.Candeias, T.Pellegrini, A.Abad, M.Tjalve, I.Trancoso, M.S.Dias, respectively, have been awarded the Best Paper Award at the 11th International Conference on Computational Processing of Portuguese will be held on October 6-8, 2014 in São Carlos, São Paulo region, Brazil.

PhD in the scope of IRIS

JOÃO FREITAS

ARTICULATION IN MULTIMODAL SILENT SPEECH INTERFACE FOR EUROPEAN PORTUGUESE

PhD degree in Electrical and Telematics Engineering by the University of Aveiro, January 2015, supervised by António Teixeira (University of Aveiro/IEETA) and Miguel Sales Dias (University Institute of Lisbon/ISTAR).

The thesis focused on silent speech interfaces language expansion to support European Portuguese with special attention on developing develop a Multimodal HCI approach based on non-invasive modalities. It was approved with praise and distinction by unanimity.

João is currently a software engineer at Microsoft, in Lisbon, Portugal.



SYMPOSIUM @METU

INTERNATIONAL SYMPOSIUM ON BRAIN AND COGNITIVE SCIENCE

Within the framework of IRIS, this event brought together researchers in cognitive science and relevant fields, including Artificial Intelligence, Linguistics, Computer Science, Anthropology, Psychology, Neuroscience, Philosophy, and Education. This year's symposium had two keynote speakers: Margaret Boden (University of Sussex), Mark Steedman (University of Edinburgh) and four invited speakers: Aylin Küntay (Koc University), Daniela Schulz (Yeditepe University), Seyhun Topbas (Anadolu University), Bonnie Webber (University of Edinburgh). The symposium was held in Middle East Technical University, Ankara, Turkey on the past 19 April.

RESEARCHERS AND VISITING PROFESSORS @Microsoft

In the first quartile of 2015, Microsoft welcomed Prof Cengiz Acarturk and MSc student Ece Kamer Takmaz, from the Middle East Technical University, Turkey) and PhD student Julia Olcoz from the University of Zaragoza, Spain to work on the IRIS project.

As usual the secondments became an international forum for the exchange of knowledge among academia and industry on recent technical issues in the field of speech recognition and eye tracking.

Various hands-on sessions covered a range of HCI concepts and experiments that have been already important for creating synergies and multidisciplinary research proposals.



IRIS IN THE MEDIA

- Newspaper article in [Heraldo de Aragón](#): "[Proyecto Iris, una plataforma europea que abre ventanas para facilitar la comunicación](#)" (Iris Project, an European platform that open doors to facilitate the communication), Feb 20, 2015
- News in [AB Bilgi](#), EU in Turkey - Approaching the EU to citizens through journalists
- Newspaper article in [Zaragoza, Buenas Noticias](#), Feb 27, 2015

This newsletter intends to disseminate all the activities within the framework of the project IRIS: Towards Natural and Interactive Communication, with a 6-month regularity.