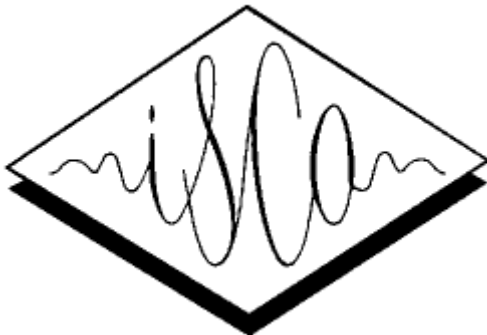# EUROSPEECH 2003 - INTERSPEECH 2003
8th European Conference on Speech Communication and Technology

**Geneva, Switzerland
September 1-4, 2003**

Speechalator: Two-Way Speech-to-Speech Translation on a Consumer PDA

Alex Waibel (1), Ahmed Badran (1), Alan W. Black (1), Robert Frederking (1), Donna Gates (1), Alon Lavie (1), Lori Levin (1), Kevin A. Lenzo (2), Laura Mayfield Tomokiyo (2), Jurgen Reichert (3), Tanja Schultz (1), Dorcas Wallace (1), Monika Woszczyna (4), Jing Zhang (3)

**(1) Carnegie Mellon University, USA
(2) Cepstral LLC, USA
(3) Mobile Technologies Inc., USA
(4) Multimodal Technologies Inc., USA**

This paper describes a working two-way speech-to-speech translation system that runs in near real-time on a consumer handheld computer. It can translate from English to Arabic and Arabic to English in the domain of medical interviews. We describe the general architecture and frameworks within which we developed each of the components: HMM-based recognition, interlingua translation (both rule and statistically based), and unit selection synthesis.

Full Paper

Bibliographic reference. Waibel, Alex / Badran, Ahmed / Black, Alan W. / Frederking, Robert / Gates, Donna / Lavie, Alon / Levin, Lori / Lenzo, Kevin A. / Tomokiyo, Laura Mayfield / Reichert, Jurgen / Schultz, Tanja / Wallace, Dorcas / Woszczyna, Monika / Zhang, Jing (2003): "Speechalator: two-way speech-to-speech translation on a consumer PDA", In *EUROSPEECH-2003*, 369-372.