



LIBERATED LEARNING

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The Multi-Speaker Feasibility Study was undertaken by

Dr. Stanley Armstrong at Saint Mary's University in the spring of 2006, supported by funds from the contribution agreement with the Social Development Partnerships Program of Human Resources and Social Development Canada.

Small working groups often involve multiple-speakers who may also occasionally all speak at the same time. The challenge is to see whether or not ViaScribe™ can transcribe each of these speakers and then display the transcripts, matching speaker to display in the

correct sequence, without sacrificing accuracy.

This study explored two alternative routes (see box below) for implementing this multiple speaker capability in ViaScribe™.

Results were very promising as it was possible to display transcripts of multiple speakers in a single window with each contribution in the correct temporal order as a demonstration of the proof of concept. A limitation is the amount of screen required to display each of the multiple transcripts at an acceptable screen size for viewing.

The Network Approach: multiple speakers are each equipped with a computer linked to every other computer in the group using a ViaScribe™ Personal Display Network.

The Single Host Approach: multiple speakers each use an individual audio input to a single computer running multiple instances of ViaScribe™



ViaScribe

Research and Development

Continued



Comparing Accuracy Rates

Cambrian College, Australian National University, University of the Sunshine Coast

Feedback to date from students in Liberated Learning classrooms has shown that accurate display of the spoken word is the core issue for user acceptance. Adoption will be sustained by accurate transcriptions, available on a large scale, through a networked environment. Accuracy rates are affected by many factors, not the least challenging of which is the ability to correctly interpret accents in spoken English. This problem is common to all speech recognition applications.

Consortium members are approaching the task from a comparative perspective. The research team is comparing accuracy rates for IBM ViaScribe™ and the newest version of Dragon Naturally Speaking. The team is testing the two products using two complementary protocols. The first test compares both products using trained vs. speaker independent profiles in UK English. The second protocol employs trained profiles in both products to compare three further English language variants: Canadian English, Australian English and Canadian French.

http://www.cambrianc.on.ca/schools/school_gc.htm

<http://sts.anu.edu.au>

<http://www.usc.edu.ca>

Real Time Editing

Dr. Mike Wald
University of Southampton, UK

Optimized voice profiles and high quality sound pickup are critical elements in achieving greater than 90% accuracy in speech to text transcription. Dr. Wald's approach to improving accuracy focuses on the visible end-product of SR technology... the transcription itself. While after the fact third party editing is adequate for posting notes, it does not address the issue of comprehension in real time. Real time editing provides an immediate solution to reduced accuracy, bridging the implementation gap between current speech engine capabilities and speech engine prototypes under development.

Dr. Wald has developed a client-server application that produces a personalized ViaScribed display on an individual's laptop over either a wired or wireless network. He has also developed a real-time editing prototype application that works with the client-server personalized display to provide real-time captioning for meetings, classrooms, conferences and telephony. Current research will refine the prototype into a robust stand-alone application.

<http://www.ltg.ecs.soton.ac.uk>

<http://www.ecs.soton.ac.uk>

<http://www.soton.ac.uk>

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Corporate Partnership with RBC Financial Group

Liberated Learning has been working with RBC Financial Group since 2004 to incorporate speech recognition technology into the world of banking and finance. The initial collaboration introduced ViaScribe™ into RBC corporate training environments, improving access to information for RBC employees. Shareholders were also introduced to a new level of accessibility when ViaScribe™ SR technology was used to caption the Annual General Meeting in February 2005. The AGM was a tremendous success and laid the foundation for the development of further initiatives.

Phase II activities are now underway, focusing on the development of Multi-Speaker capability. The original proof-of-concept research completed by Dr. Stanley Armstrong at Saint Mary's University is the starting point for a new project under way between Saint Mary's University Computer Science Department and IBM Research. The project focuses on using speech recognition to transcribe meetings and facilitate information retrieval. The project will also investigate using ViaScribe™ as a portable communication tool for RBC employees with hearing impairments. The research is supported by a financial contribution from RBC Financial Group.



Luncheon with Liberated Learning at the Canadian Club

Liberated Learning made its debut at the Canadian Club in Toronto recently, in front of 500 members of the Canadian business community. On September 25, 2006, the President of the Canadian Club Board of Directors, Ms. Noella Milne employed ViaScribe™ technology to display her introductory remarks to the audience gathered to hear the guest speaker, Nortel CEO, Mr. Mike Zafirovski. This opportunity to showcase Liberated Learning and ViaScribe™ was made possible by the sponsorship of RBC Financial Group working with the Development Office of Saint Mary's University.

The occasion also provided the opportunity for representatives of the national disability organizations, CHS, CHHA, LDAC and Easter Seals Canada involved in the Universal Liberated Learning project to meet with each other and also the Director of the Office of Disability Issues, HRSDC, Mr. George Thwaites. IBM was represented by Frances West, Director of the Worldwide Accessibility Center and Dr. Sara Basson, Program Director IBM Research - Human Ability and Accessibility Center.

The luncheon address was broadcast live by Rogers Cable TV. The webcast can be viewed at: <http://www.vvc.ca/webcast/canadianclub/09252006>. For more information about the Canadian Club, visit <http://www.canadianclub.org/>



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