

HLT/NAACL-06

Medical Speech Translation

Proceedings of the Workshop

9 June 2006

New York Marriot at the Brooklyn Bridge
New York, NY, USA

Production and Manufacturing by
Omnipress Inc.
2600 Anderson Street
Madison, WI 53704

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Introduction

Medical applications have emerged as one of the most popular domains for speech translation, and several functional systems now exist. Despite this, there is so far no established consensus on any of the central questions, including the following:

- Does medical speech translation pose special problems, and if so, what are they?
- What do the users (both doctors and patients) actually want? What constitutes acceptable performance, given that medicine is a safety-critical area?
- What are the alternatives to speech translation for non-L1 speakers in healthcare situations?
- What are the most important tasks, sub-domains and language pairs?
- What architectures are most suitable for medical speech translation applications? (Fixed-phrase, ad hoc phrasal rules, rule-based, statistical...)
- What evaluation/data collection methodologies are appropriate to medical speech translation?
- What requirements are there on hardware platforms? What options currently exist?
- How close are we to having applications that can be used in the field?

In this one day workshop, our aim has been to get together as many as possible of the key players in this field, so that we can exchange information and clarify the above and other issues. We expect the workshop to be of interest to people working in all three component communities - speech technology, machine translation, and medicine.

The main body of the workshop consists of two parts: oral presentation of papers, followed by a demo session. We will end with a panel discussion, which will include representatives of both the system developer and medical user communities.

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Conference Program

9:15–9:30 Opening Remarks

Session 1: Full Papers 1

9:30–10:00 *Usability Issues in an Interactive Speech-to-Speech Translation System for Health-care*

Mark Seligman and Mike Dillinger

10:00–10:30 *Evaluating Task Performance for a Unidirectional Controlled Language Medical Speech Translation System*

Nikos Chatzichrisafis, Pierrette Bouillon, Manny Rayner, Marianne Santaholma, Marianne Starlander and Beth Ann Hockey

10:30–11:00 Break

Session 2: Full Papers 2

11:00–11:30 *Speech to Speech Translation for Medical Triage in Korean*

Farzad Ehsani, Jim Kimzey, Demetrios Master, Karen Lesea and Hunil Park

11:30–12:00 *Automated Interpretation of Clinical Encounters with Cultural Cues and Electronic Health Record Generation*

Daniel T. Heinze, Alexander Turchin and V. Jagannathan

12:00–12:30 *Language Engineering and the Pathway to Healthcare: A User-Oriented View*

Harold Somers

12:30–14:00 Lunch

Session 3: Formal Demo Presentations

14:00–14:15 *Converser (TM): Highly Interactive Speech-to-Speech Translation for Healthcare*

Mike Dillinger and Mark Seligman

14:15–14:30 *MedSLT: A Limited-Domain Unidirectional Grammar-Based Medical Speech Translator*

Manny Rayner, Pierrette Bouillon, Nikos Chatzichrisafis, Marianne Santaholma, Marianne Starlander, Beth Ann Hockey, Yukie Nakao, Hitoshi Isahara and Kyoko Kanzaki

14:30–14:45 *S-MINDS 2-Way Speech-to-Speech Translation System*

Farzad Ehsani, Jim Kimzey, Demetrios Master, Karen Sudre, David Domingo and Hunil Park

14:45–15:00 *Accultran: Automated Interpretation of Clinical Encounters with Cultural Cues and Electronic Health Record Generation*

Daniel T. Heinze, Alexander Turchin and V. Jagannathan

15:00–15:15 *A Multi-Lingual Decision Support Prototype for the Medical Domain*

David Dinh, Dennis Chan and Jack Chen

15:15–15:30 *IBM MASTOR SYSTEM: Multilingual Automatic Speech-to-Speech Translator*
Yuqing Gao, Bowen Zhou, Ruhi Sarikaya, Mohamed Afify, Hong-Kwang Kuo,
Wei-zhong Zhu, Yonggang Deng, Charles Prosser, Wei Zhang and Laurent Besacier

15:30–16:00 Break

Session 4: Informal Demo Presentations and Panel

16:00–17:00 Demos

17:00–17:30 Panel

