Proceedings of the HLT-NAACL 2004 Workshop: Interdisciplinary Approaches to Speech Indexing and Retrieval

May 6, 2004
Boston, USA

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INTRODUCTION

This volume contains the papers accepted for presentation at the HLT-NAACL 2004 Workshop: Interdisciplinary Approaches to Speech Indexing and Retrieval held on May 6, 2004 in Boston.

For nearly a decade, speech indexing and retrieval have been a focus of research in two largely independent communities, one at the intersection of speech recognition and information retrieval, a second at the intersection of information science and digital libraries. Much has been learned, but there has been remarkably little crossover between the two communities. As a result, we know a lot about the technical requirements for audio indexing of broadcast materials, but the state of the art for many other types of spoken word collections still depends on manual indexing or on automated harvesting of associated text and metadata.

The goal of this workshop is to create a venue where experts on speech processing, computational linguistics, information retrieval, and user needs can share their perspectives. Specifically, we have focussed on:

- User needs for end-user and intermediated search and browsing, including functional requirements, interaction and interface design.

- Automated speech processing capabilities that can generate feature sets for use in downstream processing, including speech recognition under difficult conditions, speaker detection and verification, and characterization of prosody.

- Alignment and indexing techniques to exploit associated materials such as broadcast production logs, scripts and transcripts, minutes of meetings, pictures of artifacts, and metadata provided with audio streams.

- Segmentation, clustering, classification and annotation techniques, including those based on speaker detection, topic characterization, acoustic condition, and discourse structure.

To further reflect on this theme, the conference program also includes several invited talks from researchers representing each of the areas identified above, panel discussions and submitted papers.

We wish to thank our program committee for reviewing the submitted papers and their active participation in deciding the structure of this workshop. We are grateful to the organizers of HLT-NAACL 2004 for their help in putting this workshop together.

Bhuvana Ramabhadran & Douglas Oard (editors)
May 2004

Table of Contents

Interdisciplinary Approaches to Speech Indexing and Retrieval

PRELIMINARY PROGRAM

Thursday, May 6

8:45-8:55	Welcome
8:55-9:40	Keynote Speech

SESSION 1

9:40-10:00	Invited Speaker
10:00-10:10	Discussant
10:10-10:30	Dicsussion
10:30-11:00	BREAK

SESSION 2

11:00-11:20	*A System for Searching and Browsing Spoken Communications* Lee Begeja, Bernard Renger, Murat Saraclar, David Gibbon, Zhu Liu and Behzad Shahraray
11:20-11:40	*Analysis and Processing of Lecture Audio Data: Preliminary Investigations* James Glass, Timothy J. Hazen, Lee Hetherington and Chao Wang
11:40-12:00	*Audio Hot Spotting and Retrieval using Multiple Features* Qian Hu, Fred Goodman, Stanley Boykin, Randy Fish and Warren Greiff
12:00-12:10	Discussant
12:10-12:30	Dicsussion

12:30-14:00	LUNCH/POSTER SESSION

Poster	Invited Poster
Poster	Invited Poster
Poster	*Scoring Algorithms for Wordspotting Systems* Robert W. Morris, Jon A. Arrowood, Peter S. Cardillo and Mark A. Clements
Poster	*Using Soundex Codes for Indexing Names in ASR Documents* Hema Raghavan and James Allan
Poster	*Assessing Prosodic and Text Features for Segmentation of Mandarin Broadcast News* Gina-Anne Levow

SESSION 3

14:00-14:20	Invited Speaker
14:20-14:40	Invited Speaker
14:40-15:00	*General Indexation of Weighted Automata - Application to Spoken Utterance Retrieval* Cyril Allauzen, Mehryar Mohri and Murat Saraclar
15:00-15:10	Discussant
15:10-15:30	Dicsussion
15:30-16:00	BREAK

PANEL DISCUSSION ON SETTING THE RESEARCH AGENDA

16:10-16:20	Brief Statements from Panelists
16:20-16:35	Panelists respond to issues posed by the moderator
16:30-16:55	Panelists discussion with the audience
16:55-17:00	Wrap up

Author Index