

Statistical Approaches to Language" Workshop at the
32nd Annual Meeting of the ACL, 1994

T. Kemp: *Data-Driven Codebook Adaptation in phonetically tied SCHMMs*. to appear in Proc. ICASSP 95

T. Sloboda: *Dictionary Learning: Performance through Consistency*. to appear in Proc. ICASSP 95

P. Geutner: *Using Morphology towards better Large Vocabulary Speech Recognition Systems*. to appear in Proc. ICASSP 95

U. Bodenhausen: *Automatic Structuring of Neural Networks for Spatio-Temporal Real-World Applications*. Ph.D thesis, University of Karlsruhe, June 1994

J.-L. Gauvain, L.-F. Lamel, G. Alda and M. Alda-Decker:
MBI Continuous Speech Dictation System Evaluation on the ARPA Wall Street Journal Task. Proc. ICASSP 94, vol. 1, pp. 557-560

Understanding Spontaneous Speech: The System Proc. ICASSP 91, vol. 1, pp. 365-367

Chomsky, N., G.K. Pillemer and I. A. Sag: *Generative Grammar*. Blackwell Publishers, Cambridge, MA
Harvard University Press, Cambridge, MA

Functional grammar: A generative approach to representation. In *The Structure of Grammatical Relations*, pp. 173-198. Cambridge, MA: MIT Press, 1982.

Case-based Syntax and

Model for
Grammars. Proc.

Robust Speech Repair

After locating and highlighting erroneous sections in the recognizer hypothesis, misrecognitions are corrected.

The *spoken hypothesis correction* method uses N-Best lists for both the initial utterance and the response section. The N-Best list for the highlighted section of the initial utterance is rescored using scores from the secondary utterance. Depending on the N-Best lists, most misrecognitions can

The *spoken hypothesis correction* method requires a highlighted erroneous section. A limited sequence of letter restrictions can be used to restrict the N-Best

2. *The Linguistic Feature Labeler* attaches features and feature values (if applicable) to these chunks. There is a classifier for each feature, which finds zero or one atomic value. Since there are many features, you may get none, one or several pairs of values. As a feature normally works at a chunk level, the classifier is a parallel feature at a parallel level. This prevents the feature from being

Concept Based Speech Translation

The basic premise of the concept based approach is that the structure of the information conveyed is largely independent of the language used to encode it. It tries to model the information structures e.g. the scheduling task, and the way they are presented through words in a particular language. It is an extension of the

matrix of the speech recognizer used. First, phonetic transcriptions for all appearances of each word are generated by the help of a phonem recognizer. Then, variants are infrequent or which would lead to errors. Confusable phonemes are eliminated. The model is retrained allowing for variants. This process is repeated for adaptation.

approach leads to improved performance with appropriate weighting of the output from each strategy.

Cognition Performance Analysis

baseline JANS-2 recognizer can be described as

using: IDA on mlscale fourier spectrum

acoustic features (power, silence)

using: DQ-2 or phonetically tied

models

first pass, followed by

second word bi-

nally, we report on efforts to detect erroneous system output and provide interactive methods to recover from such errors.

JANUS Overview

Collection

Collection to establish a large database of spontaneous human negotiation dialogs in English collected about 18 months ago. Europe, the US and several

Integrating Different Learning Approaches into a Multilingual Spoken Language Translation System*

P. Geutner¹, B. Suhr², F.-D. Buß¹, T. Kemp¹, L. Mayfield², A. E. McNair¹,
I. Bogina¹, T. Schultz¹, T. Sloboda¹, W. Ward², M. Wszczyńska¹ and A. Wibel^{1,2}

pgeutner@ra.uka.de

Interactive Systems Laboratories

¹ Karlsruhe University (Germany)

² Carnegie Mellon University (USA)

Abstract

ual spoken language trans-
knowledge about both
s of each lan-
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