

# LVCSR-BASED LANGUAGE IDENTIFICATION

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## ABSTRACT

Language identification is an important problem in  
bilingual speech recognition and understanding. In this  
paper, we study a language identification system that  
explores the influence of different knowledge sources  
on

### 3. OVERALL SYSTEMS STRUCTURE

There are several kinds of architectures for IID systems. An *integrated* architecture consists of a single global recognition system which is language-independent as described in [3]. One drawback is the increase in complexity when adding languages to be identified.

Alternatively, for each language to be identified, a separate system is trained. In a *parallel* architecture, all systems are trained with

### 5.1. First Experiments

In earlier experiments we used German data recorded at Karlsruhe and English data recorded at CMU (to get native speakers). The CMU data are collected in office environment while the data collected at CMU are very clean. We found that testing conditions overestimate the language significantly [9]. In the following experiments, we

### 5.3. Final System

Finally we built two 4 language systems to identify German, English, Spanish and Japanese. For these final systems we used the new recognizer [7] which is improved in the main by e.g. incorporating the decoder and better phonem recognizer. Therefore we called them *ESPEC* and *ESPEC-OR*.