Supplemented Speech Recognition for Individuals with Dysarthria: Preliminary Results

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ABSTRACT

This presentation describes the preliminary investigation of the Supplemented Speech Recognition (SSR) system for speakers with dysarthria. This system incorporates automatic speech recognition (ASR) optimized for dysarthric speech, first letter identification, and word prediction. Keystroke savings using word prediction averaged 59.6% for typical and 44% for atypical phrases. Keystroke savings using the full SSR averaged 68.2% for typical and 67.5% for atypical phrases. The SSR identified the target word an average of 80.7% of the time for typical and 82.8% of the time for atypical phrases. Relationships between sentence intelligibility, keystroke savings, or system performance could not be claimed. Individuals with dysarthria using SSR could achieve high keystroke savings regardless of speech severity.

Keywords:
automatic speech recognition, dysarthria, computer access

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