

A study of manual articulatory feature-based transcription of conversational speech.
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This study investigates the manual labeling of speech, and in particular conversational speech, at the articulatory feature level. A detailed transcription, including subtleties such as overlapping or reduced gestures, is useful for studying the great pronunciation variability in conversational speech. This type of labeling also facilitates the testing of automatic feature classifiers, such as those used in articulatory approaches to automatic speech recognition. For this study, approximately 100 utterances drawn from the Switchboard database have been transcribed using eight articulatory tiers rather than the traditional single phonetic tier. The tiers include: place and degree for up to two constrictions, nasality, glottal state, lip rounding, and vowel quality. Two transcribers have labeled this set of utterances in a multi-pass strategy, allowing for correction of errors. Preliminary analysis shows a high degree of inter-transcriber agreement. Further analysis of the data is being performed to address a number of questions, such as: How quickly and reliably can this type of transcription be done? What are its advantages and disadvantages relative to purely phone-based transcription? What characteristics of the utterances correspond to high or low transcriber agreement? What can be learned from the data regarding articulatory phenomena such as reduction and asynchrony?

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