
Abstract

In speaker recognition applications, channel variability is a major cause of errors. Techniques in the feature, model and score domains have been applied to mitigate channel effects. In this paper we present a new feature mapping technique that maps feature vectors into a channel independent space. The feature mapping learns mapping parameters from a set of channel-dependent models derived from a channel-independent model via MAP adaptation. The technique is developed primarily for speaker verification, but can be applied for feature normalization in speech recognition applications. Results are presented on NIST landline and cellular telephone speech corpora where it is shown that feature mapping provides significant performance improvements over baseline systems and similar performance to Hnorm and Speaker-Model-Synthesis (SMS).