Abstract

This paper investigates the use of probabilistic mixture densities for text-independent speaker identification in a noisy telephone channel environment. Two techniques for noise compensation are considered. In the first approach, a background noise model is integrated directly into the model for speech. In the second approach, noise preprocessing techniques are used in to compensate noisy observations before passing them along to the speaker classifier. Both techniques are evaluated for speaker identification on conversational utterances from ten speakers collected over long distance telephone channels.