
Abstract

This paper presents text-independent speaker identification results for varying speaker population sizes up to 630 speakers for both clean, wideband speech and telephone speech. A system based on Gaussian mixture speaker models is used for speaker identification and experiments are conducted on the TIMIT and NTIMIT databases. The TIMIT results show very large population performance under near ideal conditions and the NTIMIT results show the corresponding accuracy loss due to telephone transmission. This is believed to be the first speaker identification experiments on the complete 630 speaker TIMIT and NTIMIT databases and the largest text-independent speaker identification task reported to date. Identification accuracies of 99.5% and 60.7% were achieved on the TIMIT and NTIMIT databases, respectively.