NOISE COMPENSATION IN A MULTI-MODAL VERIFICATION SYSTEM

Conrad Sanderson and Kuldip K. Paliwal

School of Microelectronic Engineering
Griffith University
Brisbane, QLD 4111, Australia
{c.sanderson, k.paliwal}@me.gu.edu.au

ABSTRACT

In this paper we propose an adaptive multi-modal verification system comprised of a modified Minimum Cost Bayesian Classifier (MCBC) and a method to find the reliability of the speech expert for various noisy conditions. The modified MCBC takes into account the reliability of each modality expert, allowing the de-emphasis of the contribution of opinions from the expert affected by noise. Reliability of the speech expert is found without directly modeling the noisy speech or finding the reliability a priori for various conditions of the speech signal. Experiments on the Digit Database show the Total Error (TE) to be reduced by 78% when compared to a non-adaptive system.

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