Multimodal Biometric Algorithm: A Survey

Y. Faridah, Haidawati Nasir, A.K. Kushsairy and Sairul I. Safie

ABSTRACT

Identifying a person automatically based on a physiological or behavioral characteristics become a challenge when the data getting larger. These data have many problems which included noisy data, spoof attacks, an unacceptable error rates and others. In this study, current and new multimodal biometric algorithms are studied comparatively. Unimodal biometric used only a single sample of physiological traits while multimodal system combine at least two physiological traits. Results from the latter system proved that combination of more than one sample of biometric traits solved noisy data problem. It was found that multimodal biometric algorithm is the best solution to solve bulk data problems and to improve the accuracy, efficiency and applicability of the problems. The results of various techniques such as combination of face biometric system and iris, speech and face recognition systems proved to solve the problems in spoof attacks. It also includes processing biometric modalities sequentially until an acceptable match is identified. This study presents a review of existing and current studies and suggest a direction for future developments in multimodal system. This study will focus more on the combination among the biological traits for the purpose of automatic personal recognition.

Keywords:
Algorithm, multimodal biometrics, biological traits, 2D iris, face recognition, finger prints identification

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