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Complex background subtraction for biometric identification

Abstract

The background subtraction algorithm based on the YUV color space, image gradient and shape segmentation is used in this research to extract the region of interest from a real-time video surveillance camera. We choose to extract a human face from video sequence. This research has long been considered as an important and still challenging issue in video surveillance. In this paper we present an improved approach for detection and extraction of human face from a 2D color image. Our method produces the ellipse that contains the face, eyes and mouth which are required for face recognition. We find that this technique might be an interesting alternative for biometric identification, public face image database management, video conferencing, intelligent human computer interface and face recognition.

Keywords — Administrative data processing, anthropometry, biometrics, color image processing, human computer interaction, image processing, image segmentation