ABSTRACT

Every day in many Asia countries, banking or business activity need identify a large number of seal images. Reference seal image is compared with an input seal image to validate the authentication. However, this procedure is done as usual manually. As there are a large number of seal verifications, it takes quite a lot of time to complete this work. In order to automatically verify the seal image, a new method based on the Chinese character shape features are introduced in this study. Firstly, the main characters region of the seal is extracted. Secondly, seal image rotating and shifting technique are used to align different seals to the same position. Finally, the image phase matching technique is used to examine the difference of two seal images. The extracted seal-print image contains many useful geometry features. One can use these features to do the seal-print image identification. Since the entire seal-print images are aligned to the same position and the same orientation, the image phase matching technique is used to examine the difference of two Chinese-seal-print-images. The image phase matching technique involves the complex number manipulation and also finds the most salient feature of the resultant images.

Keywords: Seal identification, image auto-registration, image phase matching, and geometry feature compar...