The Automatic Transliteration Model of Images of the Book Hamong Tani Using Statistical Approach

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Abstract : Transliteration using Javanese manuscripts is one of methods to preserve and legate the wealth of literature in the past for the present generation in Indonesia. The transliteration manual process commonly requires philologists and takes a relatively long time. The automatic transliteration process is expected to shorten the time so as to help the works of philologists. The preprocessing and segmentation stage firstly done is used to manage the document images, thus obtaining image script units that will compile input document images free from noise and have the similarity in properties in the thickness, size, and slope. The next stage of characteristic extraction is used to find unique characteristics that will distinguish each Javanese script image. One of characteristics that is used in this research is the number of black pixels in each image units. Each image of Java scripts contained in the data training will undergo the same process similar to the input characters. The system testing was performed with the data of the book Hamong Tani. The book Hamong Tani was selected due to its content, age and number of pages. Those were considered sufficient as a model experimental input. Based on the results of random page automatic transliteration process testing, it was determined that the maximum percentage correctness obtained was 81.53%. The percentage of success was obtained in 32x32 pixel input image size with the 5x5 image window. With regard to the results, it can be concluded that the automatic transliteration model offered is relatively good.

Keywords : Javanese script, character recognition, statistical, automatic transliteration
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