ABSTRACT

Braille letters definitely help the blind in reading and doing daily activities. The problem is that the Braille is difficult to be understood for people who are not blind. In order to that, a tool that can help people to minimize the time for translating the Braille letters into Latin text automatically is very needed.

A tool like that can be created on an application that can process a document with Braille letters and translate it into a Latin text document. So that, a decoder system that can convert Braille to text is designed. The input image is taken using scanner, preprocessed, segmented, the feature is extracted using pixel wide average, and classified using K-Nearest Neighbor.

The system was tested using 18 images with 591 characters. The best level of accuracy obtained in this final task is 93,23% for k=5 with a processing time of 7,64 seconds.

Keywords : *Decoder*, *Braille*, *Pixel Wide Average*, *K-Nearest Neighbor*