

Abstract

Braille to Text Converter is a system that convert Braille character to Latin character automatic. Input of the system is Braille image in bitmap. This system works by doing some digital image processing steps on the input image. The steps are converting Braille image color to grayscale, noise removing if necessary, thresholding, segmentation and Braille dot identification. Segmentation can be done in 2 ways, they are with static grid and dinamic grid. Static grid has fixed grid size based on Braille standard size. Meanwhile, Dynamic grid has a dynamic size depend on dot existence on the image. The system output is latin character text of Braille character that is on the image.

From the testing result, system accuracy with static grid is 48,4905% for resolution 50 dpi, 97,6801% for resolution 100 dpi, 96,9446% for resolution 150 dpi, 94,5225% for resolution 200 dpi, 98,1124% for resolution 250 dpi and 93,7987% for resolution 300 dpi. While for dynamic grid 29,0249% for resolution 50 dpi, 65,0368% for resolution 100 dpi, 82,6403% for resolution 150 dpi, 84,9037% for resolution 200 dpi, 90,4749% for resolution 250 dpi and 87,8257% for resolution 300 dpi.

Keyword : Braille, digital image processing, static grid, dynamic grid.