Abstract

Barcode has been long ago used as the item's identity because of its superiority in saving information. To identify barcode, we usually using the device called barcode reader. Unfortunately, it has hidden embedded algorithm. Based on it, the author have the idea to make the redeveloped barcode identifier algorithm in an application which input is digital barcode image.

The application is developed using artificial neural network of backpropagation method to recognize characters from barcode image and Visual Basic .NET as the programming language.

From the testing result, the accuracy level of character recognition is high when the artificial of barcode is used as training or testing image. But the accuracy level is low when the photo of barcode is used as training or testing image. This is happened because the artificial of barcode image always resulting the accurate feature pattern same as the character pattern of barcode, meanwhile the photo of barcode image is not like that.

Keywords: barcode, image, artificial neural network, backpropagation