

ABSTRACT

Because the growing aspect of tourism in Indonesia, led to the existing infrastructure must be able to fulfill the needs of tourists, one of which is banking sector economic infrastructure. This time to determine how much money that they can changed to rupiah currency, foreign tourists must be browse a bank website or go to a money changer to determine the value of the rupiah and counted manually. This is not effective because it requires quite a long time. In a previous study, identification and conversion foreign currency to indonesian rupiah has resulted in a large degree of accuracy, are 96% for non-real time and 77.61% for real time with the image capture using webcam and software used is MATLAB. But the results is simulations and the hardware has not made. Therefore, the authors develop the previous study by designing and implementing applications of identification and conversion of foreign currency to indonesia rupiah based on android that can be used directly by the user.

This application can detect the name of country and the nominal of money then convert them to indonesian rupiah by capture the foreign currency using android phone camera as input. Next steps are pre-processing, feature extraction, and classification. Feature extraction process use PCA (Principal Component Analysis) methods and for classification using SVM (Support Vector Machine).

Application has been able to identify eight kinds of foreign currencies with each currency consists of 2 different currencies namely U.S. Dollar, Singapore Dollar, Hong Kong Dollar, Thailand Baht, European Euro, Malaysian Ringgit, Arabian Riyal and Korean Won. The accuracy of this application is 84.375% with computing time 33 seconds.

Key words : foreign currency, identification of foreign currency, conversion