ABSTRACT

Computer vision is one of the fields of research that can be applied in a various subject. One application of computer vision is on the hand gesture recognition system. The hand gesture is one of the ways to interact with computers or machines. In this study, hand gesture recognition is used as a password for electronic key systems.

The hand gesture recognition in this study utilized the depth sensor in Microsoft Kinect Xbox 360. Depth sensor captured the hand image and segmented using a threshold. By scanning each pixel, we detected the thumb and the number of other fingers that open. The hand gesture recognition result was used as a password to unlock the electronic key.

This system could recognize nine types of hand gesture represent number 1, 2, 3, 4, 5, 6, 7, 8, and 9. The average accuracy of the hand gesture recognition system was 97.78% for one single hand sign and 86.5% as password of three hand signs.

Keywords: Electronic key, hand gesture recognition, Kinect, depth sensor.