

ABSTRACT

Falsification of presence can still be done even RFID has been used for authentication. Falsification can be done in the absence of special data RFID owner so that attendance can be done by others. Therefore, identity proofing process should be done by identifying whether the identity is a valid one. By embedding the biometric data owner into QR code as a replacement for RFID, the authentication process can be performed. One of method that has been proposed for embedding data into QR code by extending the cell area in the black and white QR code (extended QR code). However, the capacity of data embedding was still low. For increasing the capacity, a multi-color method in subcell are was proposed. In this case, color is use for increasing the capacity. Based on the experiment, proposed method can be increased the capacity up to twice of extended QR code or equal to 16 times of the black and white QR code which is 7.424 bits for version 6.

Keyword : qr code, authentication, subcell, multiple-color.