

Review paper on security enhancement using QR CODE

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Abstract: *This research take account of QR codes security mechanism in ecommerce application, its real time application in day to day life & research areas associated. With the technology of mobile phones constantly emerging, especially in the area of mobile internet access, QR codes seem to be an adequate tool to quickly & efficiently converse*

URLs to users. It also allows offline media such as magazines, newspapers, business cards, public transport vehicles, signs, t-shirts & any other medium that may embrace print of a QR code to be used as carriers for advertisements for online products. QR code being so versatile because of its structural flexibility that it leads to so many diverse field for research such as increasing data capacity, security applications such as different kinds of watermarking & steganography as well. Several experiments have also been done for better recognition of QR code image which consists of scratch removal techniques.

Keywords— QR code, E-Commerce, ATM, Universal Product Code (UPC), watermarking, security, data capacity, scratch removal



[1] Introduction

QR code stands for Quick Response Code that is the trademark for the type of matrix barcode. It was first designed for the automotive industry by Denso Wave in Japan. QR Code system has become admired outside automotive industry because of its fast readability & greater storage capacity compared to standard UPC barcodes.

A barcode is an optical machine-readable exemplification of data relating to object to which it is committed. Primitively barcodes represented data by varying widths & spacings of parallel lines, & may be referred to as linear or one-dimensional. Later they evolved into rectangles, dots, hexagons & other geometric patterns in two dimensions. Albeit 2D systems use a variety of symbols, they are in general referred to as barcodes as well.

QR code stands for Quick Response Code, Which is trademark for type of matrix barcode which was invented by Japanese corporation Denso Wave. QR code has a number of features such as large capacity data encoding, dirt & damage resistant, high speed reading, small print out size, 360 degree reading & structural flexibility of application.

QR codes have already overtaken popularity of traditional barcode within several areas due to its several benefits such as increase within capacity, reduced size, etc. Combined with diversity & extendibility offered, it enables utilization of QR code more appealing as compare to barcodes. QR codes have capability to symbolize same amount of data within approximately one tenth

space of a traditional barcode statistically. Information like URL, SMS, contact information & plain text may be embedded into two dimensional matrix. Moreover, with explosive increment of trend to utilize smartphones has played a significant role within popularity of QR codes. A QR code consists of black modules (square dots) arranged within a square grid on a white background, which may be read by an imaging device (such as a camera, scanner, etc.) & processed using Reed–Solomon error correction until image may be appropriately interpreted. required data are then extracted from patterns that are present within both horizontal & vertical components of image.

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