A Comprehensive Study on QR Codes

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Abstract: *QR code means Quick Response Code. It is one of the most popular types of barcode. A QR code is a two- dimensional (2D) matrix that means both horizontal and vertical direction. That is why it stores a huge amount of data than a Barcode, which is a one dimensional (1D) matrix (only horizontal direction). The QR code is classified into two types: the Static QR code and the Dynamic QR code. There are many variants of QR code, like QR code Model 1 and Model 2, Micro QR code, Rectangular Micro QR code, Frame QR, iQR code, Secure QR code, HCC2D etc. The QR code provides security, fast and omnidirectional scanning (allowing users to read code quickly from any direction), huge data storage capacity and most important error correction capability (to read data if code is dirty or damaged). The most important thing is, now these days, no particular device is needed to scan QR codes. The QR code can be scanned using a smartphone as well. That means as Smartphone users increase, QR codes will become more popular. In this paper we will widely discuss the basics of the QR code, its types, encoding and decoding process of the QR code, uses of QR codes etc*

Keywords: QR code, Barcode, Types of QR code, Classification of QR code, ECC of QR code.