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Some Benefits of Using QR Codes

QR Codes come to us from Japan where they are very common. It was invented by the Toyota subsidiary Denso Wave in 1994 to track vehicles during manufacture. It was designed to allow high-speed component scanning. It has since become one of the most popular types of two-dimensional barcodes.

QR is short for Quick Response (they can be read quickly by a cell phone). They are used to take a piece of information from a transitory media and put it in to your cell phone. You may soon see QR Codes in a magazine advert, on a billboard, a web page or even on someone’s t-shirt. Once it is in your cell phone, it may give you details about that business (allowing users to search for nearby locations), or details about the person wearing the t-shirt, show you a URL which you can click to see a trailer for a movie, or it may give you a coupon which you can use in a local outlet.

In its simplest sense a QR Code is an 'image-based hypertext link' that can be used offline – any URL can be encoded into a QR Code so essentially any webpage can be opened automatically as a result of scanning the barcode. If you want to encourage someone to like your Facebook page then have your Facebook profile page as the URL. If you want your video to go viral you can encode the URL in your QR Code. The options are endless. Unlike the old bar code that is scanned with a thin beam, QR-code is defined as a two-dimensional image sensor. Three squares in the corners of images needed to normalize the image size and orientation, and the angle of the sensor is the image surface. The points are translated into binary numbers checked against the checksum.

The technical specifications for a QR Code are set down in the ISO-18004 standard so they are the same all over the world, and the only significant variations from one QR code to another (apart from the data it contains) is the number of modules required to store the data. A Version 1 QR Code is a 21x21 array of data elements with the array increasing in size by 4 modules for each increase in version number. The largest standard QR Code is a Version 40 symbol that 177x177 modules in size and can hold up 4296 characters of alphanumeric data (theoretically) compared to 25 characters for a Version 1 QR Code. While there is still a lot of scope for improvement, the resolution of average present-day camera-enabled portable devices is such that the size of the data modules (dots) on a QR Code of Version 5 or above (37x37) presents a real risk of incorrect decoding of the symbol by the device.

QR Codes have the potential to have a major impact upon society and particularly in advertising, marketing and customer service with a wealth of product information just one scan away.