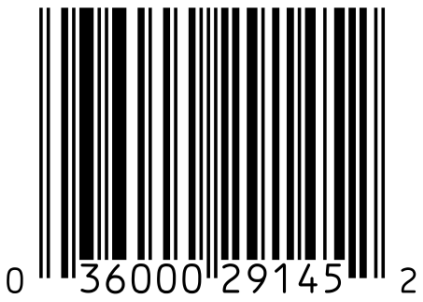
Terminology – Barcode

What is Barcode ?



A barcode (also bar code) is an optical machine-readable representation of data. Originally, barcodes represented data in the width (lines) and the spacings of parallel lines, and may be referred to as linera or 1D (1 dimen -sional) barcode or symbologies.
They also come in patterns of square, dots,hexagons, And other geometric patterns within images termed 2D (2 dimensional) matrix codes or symbologies. Although 2D systems use symbols other than bars, they are generally referred to as barcodes as well.

The first use of barcodes was to label railroad cars, but they were not commercially successful until they were used to automate supermarket checkout systems, a task in which they have become almost universal. Their use has spread to many other roles as well, tasks that are generically referred to as Auto ID Data Capture (AIDC). Systems such as attempting to make inroads in the AIDC market, but the simplicity, universality and low cost of barcodes has limited the role of these other systems. It costs about US$0.005 to implement a barcode compared to passive RFID which still costs about US$0.07 to US$0.30 per tag.[1]

Barcodes can be read by optical scanners called barcode readers, or scanned from an image by special software. In Japan, most mobile phones have built-in scanning software for 2D codes, and similar software is becoming available on smartphone platforms.

What is the benefits ?

In point-of-sale management, the use of barcodes can provide very detailed up-to-date information on key aspects of the business, enabling decisions to be made much more quickly and with more confidence. For example:

- Fast-selling items can be identified quickly and automatically reordered to meet consumer demand,
- Slow-selling items can be identified, preventing a build-up of unwanted stock,

- The effects of repositioning a given product within a store can be monitored, allowing fast-moving more profitable items to occupy the best space,
- Historical data can be used to predict seasonal fluctuations very accurately.
- Items may be repriced on the shelf to reflect both sale prices and price increases.

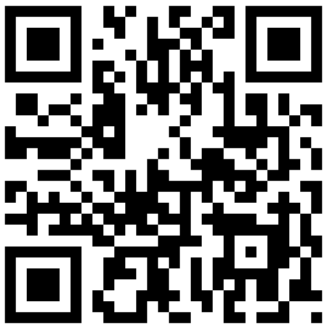
Besides sales and inventory tracking, barcodes are very useful in shipping/receiving/tracking.

- When a manufacturer packs a box with any given item, a Unique Identifying Number (UID) can be assigned to the box.
- A relational database can be created to relate the UID to relevant information about the box; such as order number, items packed, qty packed, final destination, etc…
- The information can be transmitted through a communication system such as Electronic Data Interchange (EDI) so the retailer has the information about a shipment before it arrives.
- Tracking results when shipments are sent to a Distribution Center (DC) before being forwarded to the final destination.
- When the shipment gets to the final destination, the UID gets scanned, and the store knows where the order came from, what's inside the box, and how much to pay the manufacturer.

The reason bar codes are business-friendly is that bar code scanners are relatively low cost and extremely accurate compared to key-entry– only about 1 substitution error in 15,000 to 36 trillion characters entered. The error rate depends on the type of barcode.

Terminology – QRcode

What is QRcode ?



A QR code is a matrix code (or two dimensional barcode) Created by Japanese corporation Denso-Wave in 1994. The QR is derived from 'Quick Response', as the creator Intended the code to allow its contents to be decoded at High speed. QR codes are common in Japan, where they are currently the most popular type of two dimensional codes. Moreover,most current Japanese mobile phones can read this code with their camera.

Although initially used for tracking parts in vehicle manufacturing, QR Codes are now used in a much broader context, including both commercial tracking applications and convenience-oriented applications aimed at mobile phone users (known as mobile tagging). QR Codes storing addresses and URLs may appear in magazines, on signs, buses, business cards or just about any object that users might need information about. Users with a camera phone equipped with the correct reader software can scan the image of the QR Code causing the phone's browser to launch and redirect to the programmed URL. This act of linking from physical world objects is known as a hardlink or physical world hyperlinks. Users can also generate and print their own QR Code for others to scan and use by visiting one of several free QR Code generating sites.