



NEWSLETTER ANULOM

The official newsletter of  ANULOM Technologies Pvt. Ltd. Pune

MARCH 2023

Volume : 2 | Issue : 7

For Private Circulation only

All about Barcode system

A **barcode system** is a network of hardware and software, consisting primarily of mobile computers, printers, handheld scanners, infrastructure, and supporting software. Barcode systems are used to automate data collection where hand recording is neither timely nor cost effective. Despite often being provided by the same company, Barcoding systems are not radio-frequency identification (RFID) systems. Many companies use both technologies as part of larger resource management systems.

History

In 1948, Bernard Silver was a graduate student at Drexel Institute of Technology in Philadelphia. A local food chain store owner had made an inquiry to the Drexel Institute asking about research into a method of automatically reading product information during checkout. Silver joined together with fellow graduate student Norman Joseph Woodland to work on a solution. Woodland's first idea was to use ultraviolet light sensitive ink. The team built a working prototype but decided that the system was too unstable and expensive. They went back to the drawing board. On October 20, 1949, Woodland and Silver filed their patent application for the "Classifying Apparatus and Method", describing their invention as "article classification... through the medium of identifying patterns".

The first commercially successful barcode reading system was patented in November 1969 by John F. Keidel for the General Atronics Corp.

It was soon realized that there would have to be some sort of industry standard set. In 1970,



the Universal Grocery Products Identification Code or UGPIC was written by a company called Logicon Inc. The first company to produce bar code equipment for retail trade use (using UGPIC) was the American company Monarch Marking in 1970, and for industrial use, the British company Plessey Telecommunications was also first in 1970. UGPIC evolved into the U.P.C. symbol set or Universal Product Code, which is still used in the United States. George J. Laurer is considered the inventor of U.P.C. or Uniform Product Code, which was invented in 1973. In June 1974, the first U.P.C. scanner was installed at a Marsh's supermarket in Troy, Ohio. The first product to have a barcode included was a packet of Wrigley's Gum.

Hardware

There is a wide range of



Editorial...

Dear Readers,

We are very thankful to you for accepting our Newsletter. We are sure you must be finding the information in the Newsletters interesting and useful.

You may also send us Articles for this Newsletter or suggest us a few topics on which you would like to have more information.

We are also thankful for your valuable and encouraging feedback for our services. We are sure you will stay connected with us and also recommend Anulom services to your relatives and friends.

Regards.

– Editor

hardware that is manufactured today for use in Barcode Systems. The best known brand of handheld scanners and mobile computers is Symbol, which is now a division of Motorola. Other manufacturers include Intermec, HHP (Hand Held Products), Microscan Systems, Unitech, Metrologic, PSC and PANMOBIL.

Software

While there is a range of hardware on the market, software is more difficult to find from the hardware manufacturers. Some ERP, MRP, and other inventory management software have built in support for barcode reading and some even allow the software to run directly on a mobile computer. Besides full management software, there are more than a few software development kits on the market that allow the developer to easily produce custom mobile interfaces and that handle the connect to the database. One such software is RFgen another is PeopleVox. Then there is always the option of developing a custom software solution, using a

language such as C++, C#, Java, Visual Basic.NET, and many others. Often developing a custom interface using software such as RFgen or developing new, personalized software is the most effective method since it allows the individual to have a solution that is fitted to their exact needs.

Typical system

A typical barcode system consists of some infrastructure, either wired or wireless that connects some number of mobile computers, handheld scanners, and printers to one or many databases that store and analyse the data collected by the system. At some level there must be some software to manage

A **barcode** is a visual representation of data that is scanned and interpreted for information. Each barcode contains a certain code which works as a tracking technology for products; and is represented in a sequence of lines or other shapes. Initially this technology was symbolized by the width and spaces between parallel lines that were one dimensional. This then evolved into other geometrical shapes such as rectangles and hexagons that were two dimensional. This barcode technology can be scanned by barcode readers along with newer technology on devices such as smartphones and desktop printers.

BARCODE ADVANTAGES :

- Much smaller and lighter than RFID tags and therefore easier to use.
- Less expensive than RFID tags; as barcodes are directly printed onto plastic or paper materials and therefore the only cost involved is the ink; a tiny overall cost.
- Barcodes work with the same accuracy on various materials in which they are placed.
- Barcodes are a universal technology in that they are the norm for retail products; stores that own a barcode reader can process barcodes from anywhere in the world.
- In many cases; barcode accuracy has been said to be the same or even better than RFID tags.
- Today barcodes are found on almost every item and there are no privacy issues involved with its use.
- Barcode scanners need a direct line of sight to the barcode to be able to read.
- In order to read the barcode, the barcode scanner needs to be quite close; around no more than 15ft.
- Barcodes have no read/write capabilities; they do not contain any added information such as expiry date etc. They only contain the manufacturer and product. They are very labour intensive; as they must be scanned individually.
- Barcodes have less security than RFID; as they can be more easily reproduced or forged.
- Barcodes are more easily damaged; as the line of sight is needed to scan, the printed bar code has to be exposed on the outside of the product. If a barcode is ripped or damaged there is no way to scan the product.

Radio Frequency Identification technology (RFID)

involves a tag affixed to a product which identifies and tracks the product via radio waves. These tags can carry up to 2,000 bytes of data. This technology has three parts: a scanning antenna, a transceiver with a decoder to interpret the data and a transponder (RFID tag) pre-set with information. The scanning antenna sends out a radio-frequency signal providing a means of communication with the RFID tag. When the RFID tag passes through the frequency field of the scanning antenna; it detects the activation signal and can transfer the information data in holds to be picked up by the scanning antenna.

RFID ADVANTAGES :

- Can read RFID tags from a greater distance than barcodes. § RFID tags don't need to be positioned in a line of sight with the scanner.
- RFID tags can be read at a faster rate than barcodes; as approximately 40 RFID tags can be read at the same time.
- RFID tags can work within much greater distances; information can be read from a tag at up to 300 ft.
- RFID tags are read/write devices.
- RFID contain high levels of security; data can be encrypted, password protected or set to include a 'kill' feature to remove data permanently.
- RFID tags carry large data capabilities such as product maintenance, shipping histories and expiry dates; which can all be programmed to the tag.
- *Once these are set up; it can be run with minimal human participation.*
- *RFID tags are more reusable and rugged as they are protected by a plastic cover.*
- RFID involves assembling and inserting a computerized chip; which works out to be more expensive.
- RFID readers struggle picking up information when passing through metal or liquid.
- Reader collision can occur where two signals from different readers overlap and the tag is unable to respond to both.
- Tag collision can occur when numerous tags in the same area respond at the same time.
- RFID still has two separate chips (read only and readable/writable), which cannot be read by the same machine.

From this comparison we can see that both forms of automated data collection have their advantages and disadvantages; and one may be preferable to suit your specific needs; however, one can't be said to be more superior than the other.

the system. The software may be as simple as code that manages the connection between the hardware and the database or as complex as an ERP, MRP, or some other inventory management software.

How does a barcode system work?

A series of black and white lines make up a barcode, each representing a number. **Once a product arrives at a store, the barcode is scanned into the system and a price for that particular product is matched to its code.**

What is barcode and its types?

Barcodes use lines of different widths to represent a 12 or 13 digit number. That is why the possible combinations it can represent can be up to 10^{13} different combinations. Barcodes are available in two

different types: **Linear barcodes and two-dimensional matrix barcodes.**

What is the benefit of barcode?

Barcodes encode product information into bars and alphanumeric characters, making it much faster and easier to ring up items at a store or track inventory in a warehouse. Besides ease and speed, bar codes' major business benefits include **accuracy, inventory control and cost savings.**

Which barcode is used in India?

Types of Barcodes

EAN -13 – International Article Number which is now called the European Article Number is a 13-digit number used for barcodes in Europe, India, and other nations.

शिस्तभंग कारवाईवर अपील करता येते...

- अॅड. अविनाश चाफेकर

प्रत्येक स्टेट बार कौन्सिलची एक शिस्तभंग समिती असते आणि वकिलांविरोद्ध आलेल्या तक्रारींची दखल घेऊन वकिलांना शिक्षा करण्याचा कौन्सिलला अधिकार असतो, हे आपण पाहिले. बार



कौन्सिलची शिस्तभंग समिती किंवा राज्याचा अॅडव्होकेट जनरल यांनी दिलेला निर्णय एखाद्या वकिलाला पटला नाही, अन्यायकारक वाटला तर तो बार कौन्सिल ऑफ इंडियाकडे दाद मागू शकतो. म्हणजे त्या निर्णयाविरोद्ध अपील करू शकतो, राज्य बार कौन्सिलचा निर्णय अधिकृतपणे कळल्यापासून साठ दिवसांच्या आत अपील करावे.

या अपीलावर बार कौन्सिल ऑफ इंडियाच्या शिस्तभंग समितीपुढे सुनावणी होईल. ही समिती, राज्य बार कौन्सिलच्या समितीचा निर्णय वा शिक्षा बदलू शकते. मात्र, त्यापूर्वी त्या वकिलाला त्याची बाजू मांडण्याची पूर्ण संधी दिली गेली पाहिजे.

बार कौन्सिल ऑफ इंडियाच्या शिस्तभंग समितीचा निर्णयसुद्धा पटला नाही, तर तो वकील सुप्रीम कोर्टात अपील करू शकतो. अॅडव्होकेट्स अॅक्टच्या कलम ३८ मध्ये ही तरतूद आहे.

शिस्तभंग समितीच्या निर्णयाचा / आदेशाचा स्वतः समितीच पुनर्विचार (रीव्ह्यू) करू शकते, अशी तरतूद सदर कायद्याच्या कलम ४४ मध्ये केली आहे. समिती स्वतःच्याच पुढाकाराने किंवा अन्य कोणत्या कारणाने स्वतःच्या निर्णयाचा पुनर्विचार करू शकते. स्वतःचा पहिला निर्णय जारी केल्याच्या दिवसापासून साठ दिवसांत असा पुनर्विचार केला पाहिजे.

राज्य बार कौन्सिलच्या शिस्तभंग समितीने पुनर्विचारांती घेतलेला निर्णय, दिलेला आदेश बार कौन्सिल ऑफ इंडियाने त्यावर शिक्कामोर्तब केल्याशिवाय अमलात येऊ शकत नाही. कोणत्याही बार कौन्सिलला एकापेक्षा जास्त (कितीही) समित्या स्थापन करता येऊ शकतात. इतकेच काय, पण कलम नऊनुसार शिस्तभंग समित्याही एकापेक्षा जास्त स्थापन करता येतात.

स्फुरणिका...

You must take personal responsibility...

You must take personal responsibility. You cannot change the circumstances, the seasons or the wind, but you can change yourself. That is something you have the charge of.

मला हा विचार खूपच महत्त्वाचा वाटतो. परिस्थितीवर, ऋतूवर, वाऱ्यावर तुमचा ताबा नाही. पण स्वतःवर ताबा पाहिजेच. काहीही घडो. त्यावेळी तुम्ही काय करू शकता? तर तुमची स्वतःची त्याबाबतची जबाबदारी पार पाडू शकता. अगदी साधे उदाहरण घेऊया.

एखादा मित्र किंवा ओळखीची व्यक्ती तुमच्याकडे मदत मागायला आली तर त्याची १००% गरज तुम्ही भागवू शकणार नाही. पण तुमच्या कुवतीप्रमाणे काहीतरी गरज भागवू शकाल. सकारात्मक विचारांची इथे गरज आहे. एखाद्या धार्मिक कार्यासाठी तुम्ही मोठ्या रकमेची देणगी कदाचित देऊ शकणार नाही. पण काही थोडी रक्कम तर नक्कीच देऊ शकाल. आपल्या घराशेजारी अचानक एखादा अपघात झाला, तर घरातून पाण्याची बाटली नक्कीच घेऊन जाऊ शकाल.

ज्या संस्थेचे तुम्ही काम करता, त्यांचा काही कार्यक्रम ठरला असेल तर कार्यक्रमाच्या थोडे आधी जाऊन हॉलची व्यवस्था बघू शकता. दहा-बारा मित्रांची कुमक असेल तर सगळ्यांना चहा-पान करू शकता. एवढेच नव्हे तर रोजच्या-रोज आपल्याच घरातील एखादी जबाबदारी; उदा. घर झाडण्याची जबाबदारी घेऊ शकता. अशी अनेक उदाहरणे देता येतील.

जेव्हा तुमच्या लक्षात येईल की स्वतःची जबाबदारी विशिष्ट परिस्थितीत टाळायची नाही... तर ती पार पाडायची.

- डॉ. अरविंद नवरे

डायरेक्टर, अनुलॉम टेक्नोलॉजीज प्रा. लि.

मोबाइल : ९५५२३८४९३९



FEEDBACK FROM OUR SATISFIED CUSTOMERS...

Rendered Good service by Ms. Madhuri Paygude & Mr. Hitesh Kumawat.

— RAJU INGALE

Very efficient. Most convenient for NRIs who don't want to hassle old parents or friends back home with POA to rent out property in India. Today I rented our flat in Pune out, sitting Germany. Anulom's Ms. Aprosa took care of everything. I only had to sit in front of a webcam and press my thumb on a fingerprint reader. Fantastic service. Great convenience.

— HRISHI KUL

Anulom Team has been doing a great job with the services they are providing in getting the NOI filed for your mortgage. Special thanks to Ms. Sakuntala Seth for helping me out with all my queries and making the entire process smooth and fast.

— MOHIT KOTURWAR

Services of the agency is excellent.

Miss Suchita Raul worked an extra mile to remove the hurdle in my case.

— SANOBER KHAN

Anulom does excellent job in helping with the paper/legal work. I would like to appreciate one of their representatives - Miss. Suchita for the help and the cooperation she provided to get my NOI registered. She was always there to answer any queries. Thank you once again.

— VAIBHAV PATEKAR

Important Days & Dates in March

Date	Events
01-Mar	Zero Discrimination Day
01-Mar	World Civil Defence Day
01-Mar	Self Injury Awareness Day
03-Mar	World Wildlife Day
03-Mar	World Hearing Day
04-Mar	National Safety Day
04-Mar	Employee Appreciation Day
04-Mar	Ramakrishna Jayanti
08-Mar	International Women's Day
08-Mar	No Smoking Day (Second Wednesday of March)
10-Mar	CISF Raising Day
12-Mar	Mauritius Day
14-Mar	Pi Day
14-Mar	International Day of Action for Rivers
15-Mar	World Consumer Rights Day
16-Mar	National Vaccination Day
18-Mar	Ordnance Factories Day (India)
20-Mar	International Day of Happiness
20-Mar	World Sparrow Day
21-Mar	World Forestry Day
21-Mar	World Down Syndrome Day
21-Mar	World Poetry Day
22-Mar	World Water Day
23-Mar	World Meteorological Day
24-Mar	World Tuberculosis (TB) Day
25-Mar	International Day of the Unborn Child
25-Mar	International Day of Solidarity with Detained and Missing Staff Members
26-Mar	Purple Day of Epilepsy
27-Mar	World Theatre Day

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Please send your Feedback, suggestions and FAQs about this Newsletter to : yashodhan.jatar@anulom.com



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