



QR CODE AND LIBRARY SERVICES

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Abstract:

The full form of QR code is Quick Response code. The QR code technology is just like the barcode technology. The differences between barcode technology and QR code technology is that barcode technology can handle the information only in horizontal direction and QR code technology can handle the information in both horizontal and vertical direction. QR code technology is widely used as a medium to deliver a message to end users. The QR codes are mainly used by libraries for the purpose of promoting their services. Nowadays the QR code technology is widely used by many libraries for providing quickly access to their resources.

Keywords: QR Code, QR Code Reader, Barcode Technology, ICT, Bar code, QR code Reader etc.

Introduction:

A QR code is a type of barcode that can be read easily by a digital device and which stores information as a series of pixels in a square-shaped grid. QR codes are frequently used to track information about products. Standard barcodes can only be read in one direction – top to bottom. That means they can only store a small amount of information, usually in an alphanumeric format. But a QR code is read in two directions – top to bottom and right to left. This allows it to house significantly more data. The data stored in a QR code can include website URLs, phone numbers, or up to 4,000 characters of text. The first QR code system was invented in 1994 by the Japanese company Denso Wave, a Toyota subsidiary. They needed a more accurate

way to track vehicles and parts during the manufacturing process. To achieve this, they developed a type of barcode that could encode kanji, kana, and alphanumeric characters.

What is QR Code?

QR code is short form of “Quick Response” code. It's a square-shaped black-and-white symbol that is scanned with a smart phone or laser to learn more about a product or service. These encrypted squares can hold content, links, coupons, event details, and other information that users want to see. Not every QR code is shaped like a perfect square. Sometimes they have unique patterns, colors, and logos displayed inside. You'll find them in non-digital spaces like direct mail, signage, billboards,

and even TV shows where you can scan the code on the screen using your phone.

Types of QR Codes:

1. Micro QR Code:

This QR code is usually found on product packaging. It only has one orientation making it easier to print on smaller surfaces. This code is viable even as a 2 module, whereas a QR Code requires at least 4 modules. The largest version of this QR code is M4 (17x17 modules) and can store 35 modules.

2. iQR Code:

This can be printed as a square or a rectangular QR Code. It can be printed as dot pattern code, inversion code, or a turned-over code. The maximum version is 61 (422x422 modules), which can store about 40,000 numerals.

3. SQRC Code:

This looks like a regular QR Code, except it is restricted and is used to store confidential information.

4. Frame QR:

This QR Code type has a frame area wherein you can place letters and images and can be used for promotional activities.

5. HCC2D Code:

The High Capacity Colored 2-Dimensional (HCC2D) Code is still in the prototyping phase and has been proposed by researchers to preserve QR robustness to distortions. It uses colors to increase data density and to cope with chromatic distortions. HCC2D codes use an additional field called Color Palette Pattern.

Usage and Benefits of QR Code:

1. Easy Book Search:

QR Codes can link unlimited information. So, you can link library catalogue to a QR Code. All you need to

create is a Website URL QR Code and place it at a convenient place such as book store entrance. Upon scanning, readers will directly go to the catalogue and spot their book.

2. Instant Access:

You can link help material, book guides, or e-book of a book/topic to a QR Code and place this QR Code on suitable bookshelves. Upon scanning the reader will be redirected to the encoded link, PDF, or the landing page with all the text you want.

3. Promote Your Library Efficiently:

If you use print media to promote your library, then using QR Codes will make it actionable and trackable. With Dynamic QR Codes, you can track the scanning activity of your QR Code. And get time, region, district, and browser specific data from where the QR Code was scanned.

Here are some ways you can use QR Codes to promote your library:

- i) Create a Website URL QR Code and link it to library website
- ii) Link your library app by creating an App QR Code
- iii) Provide social media account links in a QR Code
- iv) To give directions to the user
- v) To provide brief information to user
- vi) To inform of required documents
- vii) To promote the library services
- viii) To create link to all the resources available in the library
- ix) To create link to virtual tour of library sections

4. Address Book:

To get contact details of a library, visitors have to manually type all the details. and then add it to their phonebook but with QR Codes, you make the whole

process effortless. You can add contact information in a QR Code this could be the name of a concerned person, designation, contact number and email address and create a VCard QR Code. You can print this QR Code on membership cards of the readers. Upon scanning, all the contact information will automatically be saved in the reader's smart phone.

5. Make Library Environment More Engaging:

You can encode a quiz in the QR Code. This could be on a topic, author, book, or theme. Everyone likes reading anecdotes for example; you can tell an interesting fact about an author and place this QR Code against the author's books on the bookshelf. You can also play games with QR Code for example; you can play QR Code Scavenger Hunt game. You can link QR Code to audio files providing important information.

6. Provide Additional Information About Library Quickly:

You can create a QR Code to provide any new change in the library, you also relay information on library rules and regulations in a QR Code for this, you can create a Rich Text QR Code. And place it in suitable places. Besides, you can use a QR Code to provide quick access to membership forms and feedback forms. All you need to do is encode the form link in a QR Code and place it on the counter for book issue.

7. Fast and Error Free:

If not QR Codes, the only way to connect users to online content is by using a URL. But typing a URL is time-consuming and inconvenient on a mobile screen. Users are also likely to make errors while typing. Compared to this, scanning a QR Code is a much faster and error-free process.

8. Store Huge Amount of Data:

With QR Codes, you can give consumers a way to access unlimited information. Online marketing, print-based marketing of services or goods has limitations. Particularly in real estate space you can do it a newspaper add., product packaging, and brochure etc. QR Code is more useful to store and display large data.

9. No Specific Skill is Required:

QR codes are easy to set up and use for both librarians and users. On the librarian side most mobiles integrate with QR codes, on the users side users already know how easy a QR code is to scan.

10. No Additional Technology is Required:

A regular camera is a type of optical scanner. That's why our smart phone cameras can so easily be made to scan QR codes. Scanning a QR code is as easy as pointing a camera at something. QR code scanners allow us to scan barcodes from further away and at numerous angles.

Conclusion:

Today's world barcode have become quite trendy because of their reading, speed, accuracy and better functionality. Because of the gaining importance and popularity of QR code, its implementation to libraries is very useful. It is the power and capacity of the modern technologies that helps every reader to get the information. In the present technology-rich age, library users are becoming techno-savvy. They are continually looking for finding the ways to use technology to simplify their information gathering methods. Hence libraries are needed to be flexible in changing and adapting new technologies in its activities and services to create value added

services. QR code technology is easy to implement, free to use and growing in popularity. Incorporating them in to library services publicity and marketing campaigns, or around the library building or on the website offers users a more interactive learning experience.

References:

1. https://digital.library.unt.edu/ark:/67531/metadc1393771/m2/1/high_res_d/Paper_Kumar.pdf(accessed June 4, 2022)
2. https://portfolios.cs.earlham.edu/wp-content/uploads/2019/12/Proposal_SLMS_adarsh.pdf(accessed June 3, 2022)
3. http://events.iitgn.ac.in/2017/CLSTL/wp-content/uploads/2017/03/T7_SandeepPathak.pdf(accessed June 3, 2022)
4. <https://asistdl.onlinelibrary.wiley.com/doi/pdf/10.1002/bult.2011.1720380107>(accessed June 5, 2022)
5. <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=10617&context=libphilprac>(accessed June 2, 2022)
6. https://library.iitd.ac.in/arpit_2020-2021/Week%205%20-%20Module%2012%20-%20PPT-%20QR%20Code%20and%20Useful%20Applications%20in%20Libraries.pdf(accessed June 1, 2022)
7. <https://scanova.io/blog/qr-code-in-libraries/> (accessed June 5, 2022)
8. https://scholar.google.com/citations?view_op=view_citation&hl=en&user=hYAbHG8AAAAJ&citation_f or_view=hYAbHG8AAAAJ:roLk4NBRz8UC
9. https://scholar.google.com/citations?view_op=view_citation&hl=en&user=hYAbHG8AAAAJ&citation_f or_view=hYAbHG8AAAAJ:IjCSPb-OGz4C
10. <https://www.ijlis.org/articles/qr-code-and-useful-applications-in-libraries.pdf>(accessed June 2, 2022)
11. https://www.researchgate.net/publication/318259063_Use_of_QR_Code_in_Library(accessed June 1, 2022)
12. Madhusudhan, M and Saleeq Ahmad Dar (2017). Mobile Information Services and initiatives in university libraries: A new way of delivering information. DESIDOC Journal of Library and Information Technology. 109-118.
13. Narayanan, A S (2012). QR codes and security solutions. International journal of Computer Science and Telecommunications, 3(7), 69-71.
14. Saleeq Ahmed Dar and Madhusudhan, M (2016). Quick Response codes in University libraries : User Expectations for fast retrieval of information at the University of Delhi. Journal of Knowledge and Communication Management. 114-127.
15. Sree Lakshmi Addepalli and Sree Gowri Addepalli. 2014. Library management system using RFID technology. Int. J. Compu. Sci. Inf. Techn 5 (2014), 6932–935.