# MediciQR – Adoption of Foolproof Technology in Pharmaceuticals

Varun Kannan[1], Nisha.R[2], Nishkriya.J[3], Dr. B.Vanathi[4], K. Shanmugam[5]

B.E, Dept of CSE, Valliammai Engineering College, Kattankulathur, Tamil Nadu, India[1, 2, 3]

Professor & Head, Dept of CSE, Valliammai Engineering College, Kattankulathur, Tamil Nadu, India[4]

Assistant Professor, Dept of CSE, Valliammai Engineering College, Kattankulathur, Tamil Nadu, India[5]

**ABSTRACT:** Use of QR code in pharmaceutical field enhances the path with embedding the various characteristic such as name of drug and to heal what kind of illness, Batch No, MRP, MFD date and EXP date in it. The purpose of the system is to care the end-users who can easily get through the details of medicine (drugs). Also to avoid illegal modification of drug's expiry date in-turn affecting society. People tend to magnetized towards smartphone hence using various applications to scan and decode the text. Once we scan using the application then it will redirect to the URL specified as well as it is displayed in application. Thus we bring a widening in the medicinal network to safeguard the customers. QR-code scanners help in easy-mining of Point-of-Sale that will maintain a control over the inventory database.

**KEYWORDS:** QR code, end-users, expiry-date, smartphone, encoding, point-of-sale.

## I. INTRODUCTION

This ideology exemplifies the medication using QR code similar to that of Cloud based integrated management of medication [1]. Here we embed the details such as Batch Number, Name of medicine, Diagnosis of same, MRP, Manufactured date, Expiry date in the form of QR code which is of square shaped representation of dots.
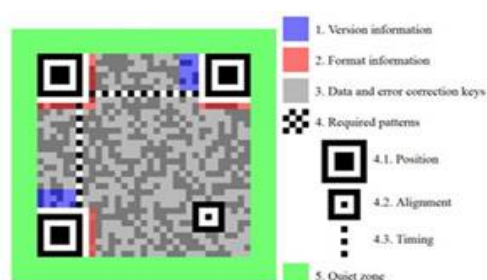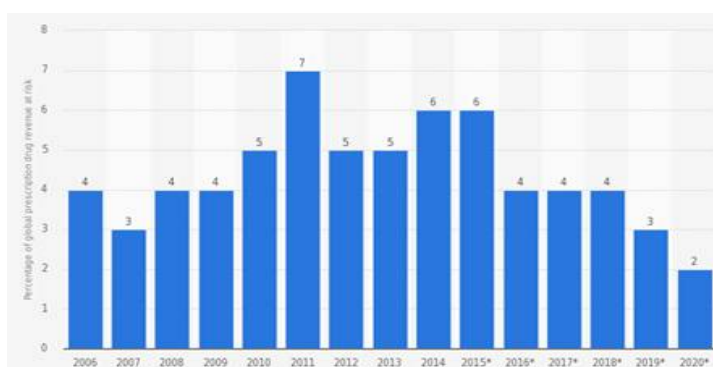


Fig 1a. QR code Representation



Fig 1b. Survey of Patent expiration at risk

Many of the Retail stores were found to be in the list where the expired medications were being sold like in Jamaica and Brooklyn [2] [3].

## II. RELATED WORK

Reporting that already such idea is implemented with the Data-Matrix code that is provided in Fig 2.

4173

*Fig 2. Sample of the Existing System*

The major pitfalls were either of details of the medicine mentioned earlier was not visible in medication or it may lead to fraudulent methods of modifying the Expiry date. It was reported that Chinese families using drugs [4] from the stores that were expired that created impacts over society. Also the QR code has vast application that has been used in the medical image access environment since it is the fastest and easy access granting code to interact with the details of the medication [7].

## III.    PROPOSED SYSTEM AND METHODOLOGY

### A.  DESCRIPTION

QR code, a booming technology, has maximized the uses of medical information [5] resulting in possible applications. In this system, the medicinal details are linked to a QR code and these medicines are manufactured with the same. If the user needs to glimpse at the minutiae then it becomes an easier process by just scanning and retrieving the details. At the manufacturing step drugs will be included with patent of expiration in QR code. This in turn will be in sale for the users. Once it has been purchased by user they can get extract the medicine patents by reading the QR code for further content of it. It will redirect to an URL where the detailed description about the medication is provided.



*Fig 3a. Proposed System of the medication*
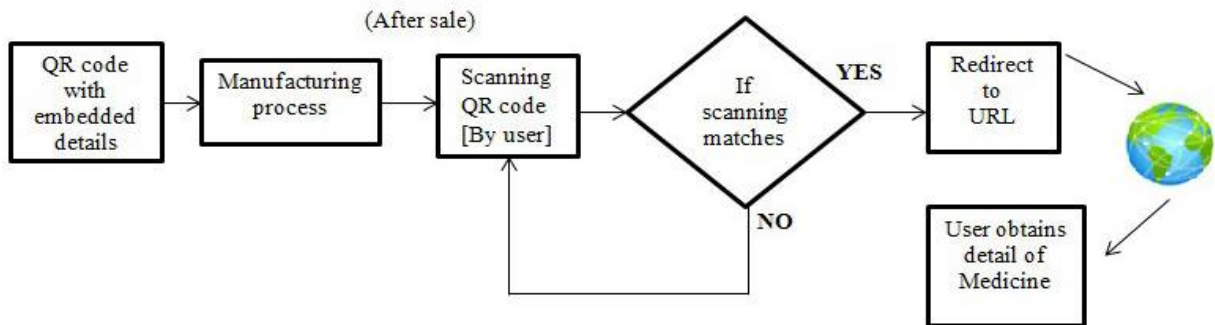
B. **SYSTEM DESIGN**



*Fig 3b. Architecture of the Proposed System*

C. **FUTURE WORK AND SOCIAL RELEVANCE**

To safeguard the customer from the corrupted activities in medicinal realm this also paves the way to future development:

(i) Android application that scans the code effectively and provides the stuffs about the medicine in the smartphone.

(ii) Also to help at the Point-of-Sale venue to make the Bill Payments at a faster pace.

Society must pay attention in controlling the administrative rights of the manufacturers' in production of patents of medicines.Steps are being taken in removing out the patent expired drugs from the store within 15 days of expiry date based on Drugs and Cosmetics Act [6].

## IV. IMPLEMENTATION AND RESULT

Sample of the home page that is implemented once the QR code is scanned is displayed in Figure 4a.



*Fig 4a. Sample of Home page*

Once the home page is displayed, user can check out with the list of medication database and refer to the specific tablet and select it as in Figure 4b.

Fig 4b. Store list

Finally after selecting the particular medicine user can check the details of it in the web page as shown in Figure 4c.



Fig 4c. Detailed list of the medication

## V.    CONCLUSION

The initiative process of the advancement in pharmaceuticals that has been implemented by the QR codes provides more security. So that the data in medicinal scope are more secured which in turn avoid illicit activities in case of patent expiration. By means of this technology, people will be more health conscious while consuming the tablets (i.e. EXP date, MFG date, tablet name, purpose, etc.). As a consequence of this technology, a healthy nation will be assured.

## REFERENCES

1. Joseph Mathew, Coll. of Eng. Trivandrum, India, Paul Philip, **"**Cloud-based Integrated Medication Management System"| August 2015 http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=7275886&newsearch=true&queryText=Cloud-based%20Integrated%20Medication%20Management%20System
2. New York State Attorney General "Eric T. Schneiderman", Press Release http://www.ag.ny.gov/press-release/survey-finds-many-retailers-selling-expired-medications
3. "Stores where expired products were found" http://www.ag.ny.gov/sites/default/files/press-releases/archived/store_list.pdf
4. "The Economic Times" reported Chinese families using expired drugs PTI |April 9, 2014http://articles.economictimes.indiatimes.com/2014-04-09/news/49000118_1_expired-drugs-pills-expiry-date
5. FonteloP , Liu  F , Ducut  EG, National Library of Medicine, Bethesda, MD, 20894, USA. "AMIA AnnuSympProc" [2008:945]http://europepmc.org/abstract/MED/18998785/reload=0
6. "The Times Of India" Pushpa Narayan | TNN | June 1, 2011, "Expired drugs to be moved out of stores in 15 days" http://timesofindia.indiatimes.com/india/Expired-drugs-to-be-moved-out-of-stores-in-15-days/articleshow/8671570.cms
7. A QR-Code Authentication for Medical Image Access Environment Inakollu Ramesh1, K. B. V. Rama Narasimham2 1, 2Computer Science Engineering, Guntur Engineering College, Guntur, India http://www.ijsr.net/archive/v3i10/MDgxMDE0MDI%3D.pdf

## BIOGRAPHY

**VarunKannan**doing his Bachelor of Engineering in the Computer Science Department from Valliammai Engineering College, Kattankulathur-603203, Tamil Nadu, INDIA. He is also a member of Computer Society of India (CSI). His areas of interest in research are networking in router and switches, Access control lists, computer hardware.

**Nisha. R** doing her Bachelor of Engineering in the Computer Science Department from Valliammai Engineering College, Kattankulathur-603203, Tamil Nadu, INDIA. She is also a member of Computer Society of India (CSI). Her areas of interest in research are computer networking, database management systems etc.

**Nishkriya. J** doing her Bachelor of Engineering in the Computer Science and Engineering Department from Valliammai Engineering College, Kattankulathur-603203, Tamil Nadu, INDIA. Her areas of interest are Network Security, database management etc.

**Dr. B.Vanathi** is a Professor & Head of Department of Computer Science and Engineering in Valliammai Engineering College, Kattankulathur-603203, Tamil Nadu. She is also a Ph.D. Scholar from Anna University. Her Areas of interest is Mobile and Pervasive Computing and has published 11 research papers in International journals.

**Mr. K.Shanmugam** is an Assistant Professor of Department of Computer Science and Engineering in Valliammai Engineering College, Kattankulathur-603203, Tamil Nadu. He is also a post graduate with areas of interest in Image processing, Biometric and Mobile commerce. He has published researches in nearly 11 International journals.