

E-Raationing under PDS Using Biometric Device

Prof. Sawant V. V1

Savtribai Phule Pune University,
Assistant Professor Computer Department Engineering,
SVPM's Collage of Engineering Malegaon(BK)

Miss. Kondhare Bhakti2

Savtribai Phule Pune University,
Student, Computer Engineering Department,
SVPM's College Of Engineering Malegaon(BK)
bhaktikondhare60@gmail.com

Miss.Gajele Manisha2

Savtribai Phule Pune University,
Student, Computer Engineering Department,
SVPM's College Of Engineering Malegaon(BK)
manishagajele24@gmail.com

Miss. Kshirsagar Anjali2

Savtribai Phule Pune University,
Student, Computer Engineering Department,
SVPM's College Of Engineering Malegaon(BK)
anjalikshirsagar24@gmail.com

Miss.Taware Vinita2

Savtribai Phule Pune University,
Student, Computer Engineering Department,
SVPM's College Of Engineering Malegaon(BK)
tawarevinita123@gmail.com

Abstract - Now-a-days system of rationing delivery to every resident is not as much as useful because in ration shop involves manual work. There are no any specific technology is used. There are lots of chances of corruption. Government is fully awake of this. It does not get any right information. So to overcome these problems we are determining this paper, an automation of E-raation under public delivery system using biometric device. This paper is about latest technology using oldest theory of ration supply. This will help to every citizen to get the quality and quantity of ration. If there will any problems occur during distribution then it will inform to government system. We are applying this paper to realize the transparency between government and every citizen. The objectives of this paper are consumer consumption, to inform about how much stock is remain in ration shop. The analysis give the details about how much corruption is reduce by using this device. This paper presents efficient model to rationing system. The public distribution system (PDS) is useful to distribute ration in equal amount to resident in less time. To progress the product delivery among every ration shop and resident, in this paper we are focusing to increase the visibility, availability of product to every citizen and also to control the increasing corruption.

I. INTRODUCTION

An automation of e-raation under public distribution system by using biometric device is much needed in today's system. Now a day we see that people have to wait in a queue for a long time. There is a excess of time for getting the products. So by using this system it gives citizen quality and quantity of goods. It is an key for poor people and interact with the government databases .We use biometric device for security resolution it identifies the give in to fingerprints records of family members databases. It is used to determine the identity of an individual resident. In india , there are many issues in delivery system like corruption ,black

marketing etc. This is visible to government by using public distribution system, which creates to guarantee the food security and provides the goods in fair price shop. This system protects the residents against price rise and black marketing. In fair price has the products like sugar, wheat, kerosene, rice etc

II. PROPOSED SYSTEM

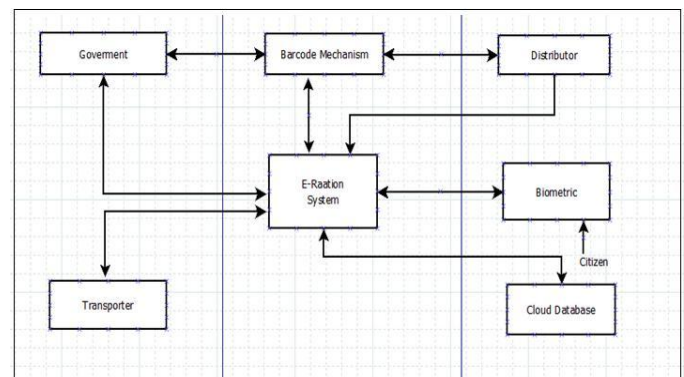


Figure 1: Block diagram

Government arrives the goods to the distributor and packages are completely sealed one. Every bag has unique barcode so no one can replace it. Government supply the goods and notify then check details with the help of barcode mechanism then reach to the distributor ,if reach then notify the government and start distribution(e-ration system).The barcode mechanism rules are assigning to two sides i.e. government and distributor side .With the help of this information there is unique barcode provide to goods. This barcode is decrypted by barcode scanner, so there is no

chance of food adulteration. Cloud database is a centralized database. It contains all the details which can be accessed by government, distributor, and e-ration system. With the help of biometric device, we take the finger prints of minimum two-three family members. So, only authenticated family members can receive their demanding goods. When citizens get the demanding goods then the report will inform to the government also it receives the information about how much amount of goods is provided to every citizen. At every time record gets updated. If any illegal action is happened in the system, then government takes an appropriate action. So, it will be helpful to increase the distribution to the maximum citizen with minimizing the corruption. Due to continuous updating of record, government will get the information about how much stock is remaining in e-ration shop.

III. MATHEMATICAL MODEL

Input : Biometric scan ,Stock Details

Output : It provides reports regarding data, also remaining stocks at each ration shop.

Mathematical Formulation:

Function= {f1,f2,f3,f4}

f1:

$$F_{cs}(t) = -G_c(t) [(M_c(t) * M_s(t)) / R]$$

Success: Proper interaction between supplier and consumer.

Failure: No proper interaction between supplier and consumer.

f2:

$$F \propto 1/R$$

Success: Cost incurred per unit is

true. Failure: Getting wrong cost.

f3:

$$G(t) = f(G_0, t)$$

Success: Getting initial value to consumer.

Failure: Getting false value to consumer.

f4:

$$X_i = (X_i^1, X_i^2)$$

for i= 1, 2, - - -

N

Success: Restrict maximum closeness between two agents to sum of radii.

Failure: If getting more closeness.

Success Conditions:

System is more secure and transparent than the normal existing system.

Failure Conditions: Not achieving transparency.

IV. ALGORITHM

Gravitational Search Algorithm and Multi-agent System supply chain management is a very dynamic operation research problem where one has to quickly adapt according to changes perceived in environment in order to minimize loss or maximize benefit. So, multi-agent system technique is a solution for this problem.

Gravitational Search Algorithm (GSA) is also a particle swarm optimization algorithm which works on the Newtonian laws of Gravity: "Every particle in the universe

attracts every other particle with a force that is directly proportional to the product of their masses and inversely proportional to the square of distance between them.

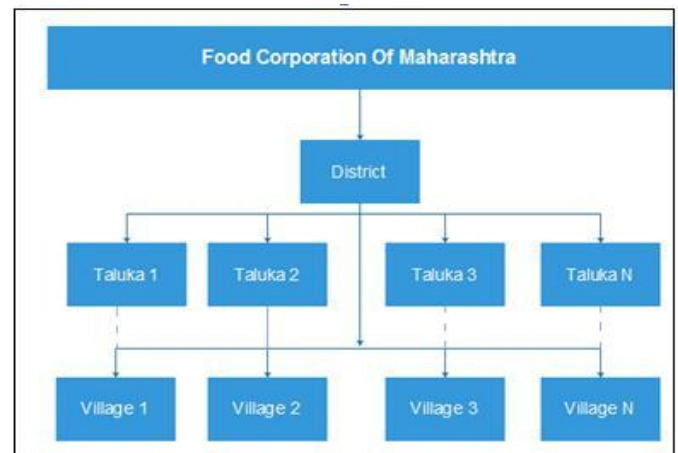


Fig 2.FCM Distribution system

We target grains distribution among various centers of Food Corporation of Maharashtra (FCM) as application domain. We assume centers with larger stocks as objects of greater mass and vice versa.

Applying Newton's law of gravity as suggested in GSA. Larger objects attract objects of smaller mass towards themselves, creating a virtual grain supply source. As heavier objects shed their mass by supplying some to one in demand, it loses gravitational pull and they keep the whole system of supply chain perfectly in balance.

Multi-agent system helps in continuous updation of the whole system with the help of autonomous agents which react to change in environment and act accordingly.

This model also reduces communication bottlenecks to a greater extent.

V. CONCLUSION

By using this scheme, we can escape the illegal stock of product. This proposed system will be supportive for government and residents to escape corruption. We can realize the clearness between them.

In this, we use the biometric device for verification resolutions. People will get their product in the correct way. Without their agreement, no one can admit their material.

By using this model, citizens will get products within the time and update to government about the routine.

VI. ACKNOWLEDGMENT

It gives us great pleasure in presenting the paper on „An automation for e-ration under public distribution system using biometric device“.

I would like to take this opportunity to thank my internal guide Prof.Sawant V. V. for giving me all the help and guidance I needed. I am really grateful to them for their kind support. Their valuable suggestions were very helpful.

REFERENCES

1. Dhanashri Pingale, Sonali Patil, Nishigandha Gadakh, Reena Avhad, Gundal S.S. "Web enabled ration distribution and corruption controlling system", International Journal of Engineering and Innovative Technology (IJEIT) Volume 2, Issue 8, February 2013
2. Rajesh C. Pingle and P. B. Boroley, "Automatic Rationing for Public Distribution System (PDS) using RFID and GSM Module to Prevent Irregularities", HCTL Open Int. J. of Technology Innovations and Research HCTLOpen IJTIR, Volume 2, March 2013 e-ISSN: 2321-1814 ISBN (Print): 978-1-62776-111-6.
3. Bhalekar Swati D., Kulkarni Rutuja R., Lawande Akshay K., Patil Varsharani V., "Online Ration Card System by using RFID and Biometrics", International Journal of Advanced Research in Computer Science and Software Engineering Volume 5, Issue 10, October-2015
4. Miss. Manisha M. Kadam, Miss. Smita R. Jagdale, Miss Arati A. Lawand, Miss. Shraddha J. Chavan Department of Electronics and Telecommunication, "Microcontroller Based Efficient Ration Distribution System", IJSRD-International Journal for Scientific Research Development— Vol. 3, Issue 02, 2015 — ISSN (online): 2321-0613
5. Kashinath Wakade*, Pankaj Chidrawar**, Dinesh Aitwade***, "Smart Ration Distribution and Controlling", International Journal of Scientific and Research Publications, Volume 5, Issue 4, April 2015.
6. Vinayak T. Shelar, Mahadev S. Patil, "RFID and GSM based Automatic Rationing System using LPC2148", International Journal of Advanced Research in Computer Engineering Technology (IJARCET) Volume 4 Issue 6, June 2015
7. David Megias, "Improved Privacy-Preserving P2P Multimedia Distribution Based on Recombined Fingerprints", IEEE Transactions on Dependable and Secure Computing, VOL. X, NO. Y, month year.
8. Desam. Sivaramireddy, G.V Ramana Reddy, "A prototype of authentication ration card system", International journal of science technology and management vol.no.4, issues no.12, December 2015.
9. M.S. Manivannan, Dr. P. Kannan and Dr. M. Karthikeyan, "Fully automated ration distribution system", International Journal of Research In Science Engineering Volume: 2 Issue: 1.