

HIGHLY SECURED AND TRUSTED RATION DISTRIBUTION SYSTEM

Mrs. Harshitha R^{*1}, Sneha S^{*2}, Nisarga ML^{*3}, Ashwitha DS^{*4}

^{*1}Assistance Professor, Electronics And Communication Engineering, G Madegowda
Institute Of Technology, Mandya, Karnataka, India.

^{*2,3,4}Student, Electronics And Communication Engineering, G Madegowda Institute Of
Technology, Mandya, Karnataka, India.

DOI: <https://www.doi.org/10.56726/IRJMETS29421>

ABSTRACT

Ration Distribution System is one of the widely controversial issues that involves corruption and illegal smuggling of goods. Present ration system has many imperfections such as weight of the material may be inaccurate due to human mistakes, the ration shopkeeper sales the products to customers at higher rate than that of recommended by the Government. Because of lack of awareness towards the ration allocation, there is a long waiting time, people have to stand in queue for longer duration etc.

I. INTRODUCTION

The maintenance of a public distribution system (PDS) Scheme is not an easy task in countries like India. India has a large number of Fair Price Shops (FPS). The government of India provides a number of groceries such as rice, wheat, sugar, kerosene etc. at a much lower rate so that the benefit goes to the poor. The planning Commission of India, in one of the report said that, "For every Rs.4 spent on the PDS only Rs.1 reaches the poor". The 57% of the PDS food grains is not received by the people who are supposed to receive. So our system aims at providing solutions to many of the existing problems. In this system, only authorized users can access the ration shops and get materials depending on the quantity available in the card.

II. METHODOLOGY



Fig: Block diagram of ration distribution system.

INFORMATION: The data of each and every process is updated to the web portal through the heads of the particular department. The data to be updated can be date and time of loading and unloading of the ration, materials dispatched, quantity, ration delivery vehicle details, etc.

WEB PORTAL: It stores the information updated by the Heads of the particular departments.

- It also stores the information of the beneficiaries and their family member's details along with the history of the ration transactions.
- When we open the web page there will be options showing the category of the user different category of the users will have different page available.
- One has to select any one of the above category and login through their credentials and access the web.

GSM: GSM is an open and digital cellular technology used for transmitting mobile voice and data services.

- A GSM model can be used to communicate the message of material delivered to the concerned authority and the beneficiaries.
- It requires a SIM card just like a mobile phone to activate communication with the network.

PDS: Public Distribution System is the process of distributing the ration to the customers. The process of PDS involves the following steps:

- Step1: Verification.
- Step2: Ration kit scanning through the Barcode scanner.
- Step3: OTP sent to the registered phone number.
- Step4: Receiving the allotted ration kit.

- Step5: Generation of the confirmation message upon receiving the ration kit to the user's phone number.

BENEFICIARY: Beneficiaries are the people who are benefitted by the government receiving the ration kit.

- Before being eligible to receive the ration, the user and his/her family members has to get registered with their ration card in the portal.
- While registering user has to provide the Aadhaar ID of all his family members for the identity proof along with the correct mobile number so that he can receive the SMS notification of the Ration Distribution Process.

III. COMPONENTS REQUIRED

Software requirements:

- HTML
- CSS
- Operating system-windows 8 or later

Hardware requirements:

- GSM module
- Food kit

IV. APPLICATION

- The application of this particular improvement is the present working of the ration shops.
- It has a lot of scope in various other areas apart from being introduced only to this particular domain.
- The ration items will be effectively delivered to the valid ration card holders who are below poverty line.
- The government services are reached to poor people effectively and also the corruption in PDS and FPS can be reduced or avoided to a great extent.
- This technology can be introduced in various places like malls, supermarkets, etc.

V. FUTURE APPLICATION

- Online payment can be implemented with either automated deduction or pre charged card from customer's bank account
- Tracking a materials through GPS technology can be done while delivering commodities to the fair shops.
- Other parts of public distribution systems are brought under automated system.
- Ration can be booked on online before going to ration shop and get a time slots and OTP for each person.
- Each consumer can access information about ration dispensing materials.
- All information of data can push to cloud about the dispensing materials and can maintain all records.

VI. CONCLUSION

The proposed project aims to minimize the malpractices such as imprecise weighing of the materials due to human mistakes which is more in a conventional ration distribution system. It reduces the processing speed, waiting time and also the material theft. The another drawback of conventional ration distribution from the perspective of providing materials to someone else if the customer fails to collect the ration at the due time is overcome by the use of this scheme.

This paper presented a novel approach to implement an efficient PDS. The main challenges faced by the current system include the identification of beneficiaries of the scheme, malpractices in the distribution of food grains, tampering with the quality of the food grains etc. These challenges are the main barriers in the successful implementation of the PDS and in the achievement of its objectives.

VII. REFERENCES

- [1] M. Vimala, P. Thamaraiselvi "Aadhar Enable Automatic Ration Distribution system using GSM and Fingerprint" in International Journal of Engineering science and computing, Vol. 9, Issue 3, pp. 20705-20706, March 2019.
- [2] M.S. Manivannan, DR. P. Kanan, DR. M. Karthikeyan "Fully Automated Rationshop Monitoring system", in IJARTEET, Vol. 3, Issue 3, ISSN 2394-3377, pp. 254- 259, April 2016.

-
- [3] Swapnil R.Kurkute, Chetan Medhe "Automatic ration distribution system", in International Conferencing on Computing for Sustainable Global Development, Vol. 1, Issue3, ISSN 3805-4421, pp.11-13, April 2016.
- [4] Rutuja Crorapwar, Anufa Bhargude, Smita Craikwad, Sneha Zagade, Prof. G.S, Bhange "Smart Automatic Rationing System", in International Journal Of Innovative Research In Science, Engineering and Technology, Vol. 8, Issue 1, ISSN 2319-8753, pp. 71-74, january2019.
- [5] Reshma Arote, Komal Nawak, Monika Shide, Prof. P.A Bansode, Prof, V.B Bhamare "Smart Rationing System Using Aadhar Card", in International Journal of Innovative research in Computer and Communication Engineering, Vol. 6, Issue 3, ISSN 2320-9801, pp. 1949- 1954, March 2018.
- [6] Aarti Bhosale, Shweta Bhor, Pratima Scabale, Pushpak Shinde, "Survey on Smart Ration card using Internet Of Things", in International Journal of Computer applications, Vol. 180, Issue 3, ISSN 8975-8887, pp. 1-2, December 2017.
- [7] J Deepa, Dr A Rijuvana Begum "RFID Based Ration Material Distributions without Human intervention", in International Journal of Latest Research in Engineering and Technology (ISLRET), Vol. 3, Issue 10, ISSN 2454- 5031, pp. 91-96, October 2017.