

# Automatic Rationing System

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**Abstract** - Corruption has been around for a very long time and will remain in the future unless governments can figure out effective ways to combat it (Mauro 1997). E-government is increasingly used to improve transparency in the government sector and to combat against corruption .E-government is being implemented in more areas of government administration for both the local and national levels worldwide. E-government system developed to reduce corruption. The aim of this paper is to organize and summarize existing theoretical and empirical work on corruption with a view identifying opportunities for further research. Computerization can help in modernizing the PDS. The southern states as usual have led the way on many reforms intended to address the issues above, and increasingly even poorer states have introduced changes in policies and implementation mechanisms to address the problems of PDS. This paper discusses strategy adapted in using ICT to control diversion and leakage in the delivery mechanism and its successful application in computerization of food grain supply chain. As an outcome of the project, 0.78 Million farmers have received computer generated cheques without any delay. Citizen involvement in the system has been increased in monitoring PDS. Here efforts from our side are done to overcome one of the corruption problem involve in ration distribution system through a kind of electrodynamic web template where distribution of ration products like kerosene, rice, wheat etc. at rural and urban areas, will be checked, monitored and controlled with filtering the problem of corruption and adulteration.

PDS is an important constituent of the strategy for poverty eradication and is intended to serve as a safety net for the poor whose number is more than 33 Crores and are nutritionally at risk. PDS is operated under the joint responsibility of the Central and the State Governments. The Central Government has taken the responsibility for procurement, storage, transportation and bulk allocation of food grains, etc. The operational details of the PDS differ from state to state. Though the policy of setting up of FPSs owes its initiation to national food policy, its implementation remains the direct responsibility of the state governments. In order to operate the PDS effectively, the Central Government issues guidelines from time to time to the states regarding the operational details of the PDS. The operational responsibilities including allocation within the State, identification of families below poverty line, issue of

- Providing food grains and other essential items to vulnerable sections of the society at reasonable (subsidized) prices
- To put an indirect check on the open market prices of various items and
- To attempt socialization in the matter of distribution of essential commodities

This paper deals with the classification of bulk food grain samples and detection of foreign bodies in food grains. A new method for inspecting food samples is presented, using ANN and segmentation to classify grain samples and detect foreign bodies that are not detectable using conventional methods easily. A BPNN based classifier is designed to classify the unknown grain samples. The algorithms are developed to extract color, texture and combined features are extracted from grains and after normalization presented to neural network for training purpose. The trained network is then used to identify the unknown grain type and it's quality in terms of pure/impure type. A Segmentation based detection model is developed to detect the foreign body in the impure grain samples. This model accepts an impure grain samples, pre-processes and segments the image using two different thresholds T1 and T2 to detect the foreign body in impure image. Finally the success rates are observed from both classification and foreign body detection models and are recorded.

## I. INTRODUCTION

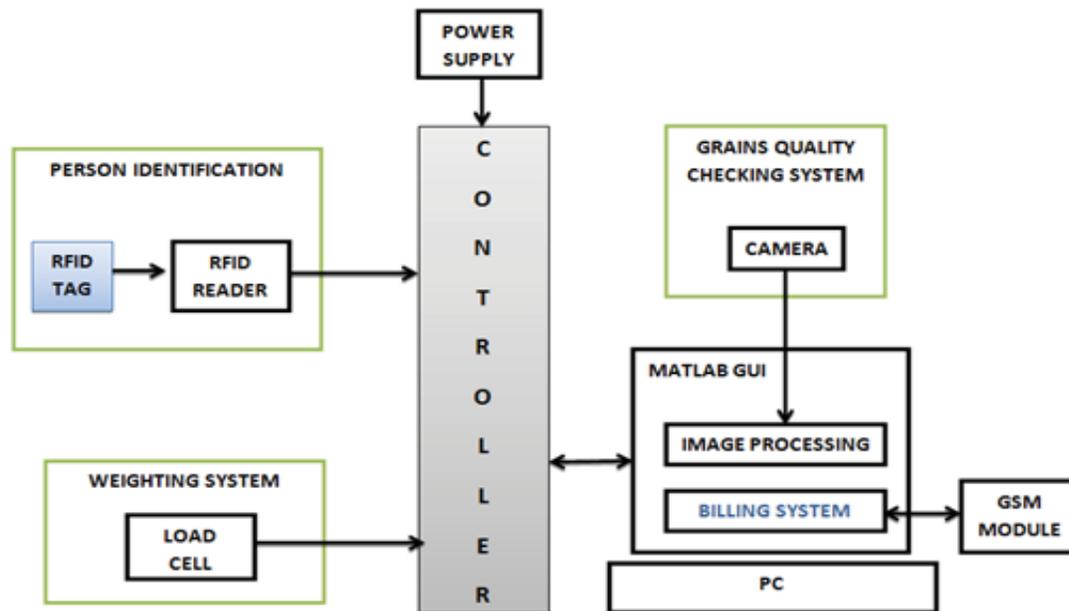
The ration distribution system is one of the largest Govt. economic policies in India. Its main motto is to provide food grains (sugar, wheat, rice, kerosene, etc.) to the people at affordable rates. The network of the ration shop is spread all over in India to provide food security to people. This distribution of ration is controlled and monitored by Central Govt. But it has so many limitations. Most of the ration shopkeepers to keep fake ration cards with them. Due to the fake ration cards, the dealer receives the extra ration from higher authority and he sales it into the open market. The may not provide sufficient amount of food to consumers. Most of the time people are not aware of the availability of ration in ration shop. The dealer may sales ration at higher rates than recommended rates by Government or may do wrong entries in register. In this way, in current situation we are facing problems of corruption in PDS. There is no such effective system through which Government gets acknowledgement of consumption of food grains by people.

Now, we need arise to make the system automated so that human intervention and manual work avoided and create the transparency in system. In our project we propose the concept about to replace manual work in public distribution system (rationing distribution system) by automated system which will be install at the ration shop. In this automated system we replace the convectional ration card by smart card in which all the details about users are provided including their "AADHAR" number which is used for user authentication. This prompted us to interface smart card reader (RFID Based) to the microcontroller and PC hyper-terminal via USB and UART. Government should have control over all transaction happen at ration shop, to involve government in the process we connected the system which is at ration shop to the government database. There will be a Smart card based ration card which will be used to identify the user by machine placed at ration shop. There are two main objective of this project one is to create the transparency in public distribution system and second is to inform the people about new scheme launch by government. In urban areas, kerosene is supplied to ration card holders in the first week of every month and the ration shop keepers are taking keen steps to distribute kerosene to cardholders a minimum of three or four days a week. But strangely, in rural areas, the general public is complaining that kerosene is not supplied to them properly. They vehemently levelled charges against the ration shop keepers for delay. In an effort to make the public distribution system (PDS) more efficient, various state government in India has decided to introduce smart cards for the consumers. In the initial phase of the project, imputers or hand-held computers would be installed Special training in operating these imputers is being given to ration dealers in the state. In the existing system, normally the system will use man power to distribute the Ration materials like sugar, Rice, Wheat Etc. It will take more time to give the people. And also the authorized person sell individual also.

In this system we will reduce labor work to distribute the Ration material like sugar, Rice, Wheat Etc. It will take less time to give the people and respective person can took any time like ATM machine. The Concept is to automate Ration Distribution System, A Govt. Of India initiative Process in which a fixed amount of ration is provided monthly to the people by the distributor. The apparatus we are designing is cost effective and can prove helpful to Government of India Ration Distribution System and to various other disciplines. In terms of feasibility it is a vast concept and an interesting task to perform and totally feasible in all aspects technical as well as other. . In this automated system we replace the convectional ration card by smart card in which all the details about users are provided including their "AADHAR" number which is used for user authentication. This prompted us to interface smart card reader (RFID Based) to the microcontroller and PC hyper-terminal via USB AND UART. Government should have control over all transaction happen at ration shop, to involve government in the process we connected the system which is at ration shop to the government database. There will be a Smart card based ration card which will be used to identify the user by machine placed at ration shop. There are two main objective of this project one is to create the transparency in public distribution system and second is to inform the people about new scheme launch by government. In urban areas, kerosene is supplied to ration card holders in the first week of every month and the ration shop keepers are taking keen steps to distribute kerosene to cardholders a minimum of three or four days a week. But strangely, in rural areas, the general public is complaining that kerosene is not supplied to them properly. They vehemently levelled charges against the ration shop keepers for delay. In an effort to make the public distribution system (PDS) more efficient, various state government in India has decided to introduce smart cards for the consumers. In the initial phase of the project, imputers or hand-held computers would be installed Special training in operating these imputers is being given to ration dealers in the state. In the existing system, normally the system will use man power to distribute the Ration materials like sugar, Rice, Wheat Etc. It will take more time to give the people. And also the authorized person sell individual also.

## II. PROPOSED ALGORITHM

In this system we will remove man power to distribute the Ration material like sugar, Rice, Wheat Etc. It will take less time to give the people and respective person can took any time like ATM machine. And also the authorized person cannot sell. Here, we are designing a system where a person displays his/her Aadhar-card or valid identity and our system gives the Ration to that user. The Concept is to automate Ration Distribution System, A Govt. Of India initiative Process in which a fixed amount of ration is provided monthly to the people by the distributor. The apparatus we are designing is cost effective and can prove helpful to Government of India Ration Distribution System and to various other disciplines. In terms of feasibility it is a vast concept and an interesting task to perform and totally feasible in all aspects technical as well as other.



All customers have to register for the ration card. The registration is done at each ration shop. For registration all customers have to provide their personnel details about their family. After this head of family is provided with RFID card which is used to buy their monthly ration. At ration shop we are using RFID card and RFID reader for identification. After reading RFID card the reader transmit the unique RFID no to the controller through UART at this time all other interrupts are disabled. Then controller will scan the database to check that the RFID card is valid or not. If it is valid then it asks for password from the customer. Keyboard is provided to enter the password. Again controller matches the password with database if valid member then the weighing machine is activated, the name and the amount of ration allotted is displayed on the LCD. Using keypad customer has to enter the product's corresponding serial number they want to buy along with quantity. After getting the input from the keyboard controller open the valve of particular container containing the products whose serial number is entered by the user. The grain will directly fall into the container placed on weighing machine. Controller continuously monitor the weight in weighing machine if the weight of grains and the quantity entered by the customer is matched then the controller will close the valve of container. The system has a one pump and one valve for the purpose of giving oil and grains respectively. The total amount which is too paid by the customer will be displayed on the LCD and the bill is deducted from his account balance and displayed on screen. Thus the system works for automatic rationing.

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- *Replacement for existing Ration Distribution System*

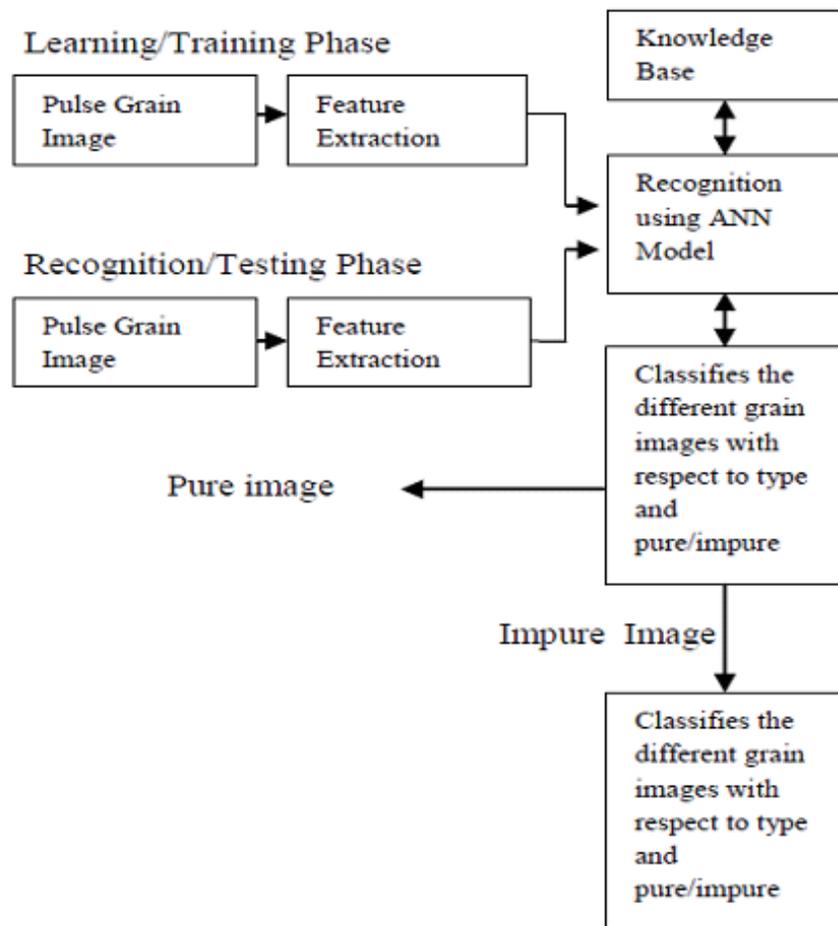
It can replace the existing Government Of India's Ration Distribution System which is responsible for distributing essential commodities to a large number of people through a network of FPS (Fair Price Shops) on a recurring basis. Our system also performs these same functions in an automated way.

- *Retail Market Sector*

It can be used in retail market sector such as in Shopping Complexes, Supermarkets, and Ration Shops to automate the process and to sell items without human intervention.

- *Large Scale implementation*

If implemented on large scale it can be used in ration processing factories and organizations for simultaneously weighing and packaging of items which are intended for selling.



#### IV. CONCLUSION

This proposed project can provide a safe, secure and efficient way of public distribution system. By using this technique ration shops solve the problem of too much manual process in Public Distribution System (PDS). This proposed project definitely paves way for a corruption reduced India in the future. This new technology gives solution and this work will make a great change in Public distribution system and provides benefit to the government about current stock information and reduce the manpower.

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