

International Journal of Computer Science and Mobile Computing

A Monthly Journal of Computer Science and Information Technology

ISSN 2320-088X



IJCSMC, Vol. 2, Issue. 12, December 2013, pg.198 – 205

RESEARCH ARTICLE

THE DESIGN OF GRANARY ENVIRONMENTAL MONITORING SYSTEM BASED ON ARM7 AND ZIGBEE

T Chandra Sekhar, Mrs. G Naga Swetha

ABSTRACT

Grain storage is a important role in the economy and the society. The quality and safety of grain storage are related to the hundreds of millions of people. In the process of grain storage, temperature and humidity are two major ecological factors that can produce an effect on the grain quality. Therefore, the parameters of temperature, humidity must be in lacking errors and real-time monitoring by supervisory systems in large granaries.

Grain is our county's important strategic resources. Due to the seasonality of its production, the storage of grain is the top priority event which relates to people livelihood. Here, we are still using our old method of storing the crops and because of this grains are spoiling soon. Also, we are unable to maintain the quality of the stored grains.

To overcome these problems, the automatic monitoring of the grain storage based on ARM7 and ZIGBEE is implemented which helps us to improve the operation levels of grains storage and reduce the grain losses during storage procedure and reduce the labor intensity. The sensors collect the information from environment, the collected signals through the analog to digital conversions. These conversions are sent to micro controller unit. This micro controller unit is connected to LCD to display the values of temperature, humidity and co2 values and using GSM to achieve the system's remote control, it greatly improves the flexibility and scalability of the warehouse management which sends available data to grain depot manager (Database management) in time and filters invalid data on the spot.

Full Text: <http://www.ijcsmc.com/docs/papers/December2013/V2I12201345.pdf>