

A Real Time Flood Alert System for Dam

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Abstract- Floods are a constant threat throughout the year in areas such as the United States and Puerto Rico. Although different methods of alerts are available; Such as an emergency broadcast system or a siren, neither of which can alert a user remotely in an efficient and timely manner. The design goal of this project is to provide a real-time system capable of monitoring sudden floods in dam lots, addressing concerns of water damage in vehicles; creating a personal opt-in alert that can reach the end user through their mobile phone. In this case, the system defines two types of nodes: sensing and sync. Each sensing node uses a hydrostatic pressure sensor to monitor the water level; It will then communicate with neighboring nodes via XBee radio. The data reaches the sink node. The sink node is then responsible for sending the data received from the sensor to the remote server via the mobile communication network (GSM). By then the database of users and flood levels will be processed and processed by the server, which will send an email alert to users that will reach any mobile phone in the form of a text message (SMS). Under such a scenario, the use of exclusively freshwater resource water by agriculture would be very high and according to current market surveys it is estimated that agriculture uses 85% of the freshwater resources available worldwide, and this percentage of Due to this, population growth and food demand will remain predominant. It calls for planning and strategy to use water wisely using advances in science and technology. There are many systems for achieving water savings in various crops, ranging from basic to more technologically advanced. One of the existing systems uses thermal imaging to monitor plant water conditions and irrigation scheduling. Automation of the irrigation system is also possible by measuring water levels in the soil and by control actuators to irrigate when needed, rather than predetermining irrigation time, thus saving and using water in a more sensible way. When the volume of the substrate's volumetric water decreases below a set point, an irrigation controller is used to open solenoid valves and apply water to bed plants (Impetance, Petunia, Salvia, and Vinca Roja) goes. Emerging Global Water Crisis: Apart from managing scatter and conflict among water users, available fresh water is further contaminated by human and animal populations and pollution levels

have increased at an alarming rate. If this continues, food production will be limited which in turn will affect human productivity and thus the entire ecosystem in the coming years. The primary and most important cause of this problem is the tremendous growth in population that has grown at a rate that is faster than the rate of food production. This population growth is especially in water scarcity countries Its growth will directly impact on the world map. Food production must be increased by at least 50% for projected population growth.

Index terms- Water, Bucket, Mobile Phones

I.INTRODUCTION

A flood is a natural disaster that occurs in Malaysia almost every year that is lost Property, Loss and Life. The reason is that Malaysia faced the most serious climatic problem Natural disaster which is a monsoon flood. Is one of the flood affected areas A large proportion of the growing population is Kuantan, Pahang. Most recent comprehensive Floods are December 2006 and January 2007 floods due to monsoon rains. The massive flood displaced more than 110,000 people and killed at least 18 people. In fact, the estimated total loss of these flood disasters is RM1.5 billion, considered the most expensive Flood events in Malaysian history. Communities at risk of frequent flood problems or major losses when flooding occurs are constantly looking for ways to reduce flood damage. One of the ways to reduce Flood effect is a forecast and warning system. Non-structural measures such as improved flooding Is an effective and economical means to reduce the loss of forecasting and warning systems Trauma of life, disaster and property damage. For example, a warning or warning to inform people early stage disaster is very important as safety precautions can be taken. Unwanted accident Unfortunately, the importance of early warning lacks concern Even though the system early flood warning system technology is now available but still Inadequacies in

systems in terms of basic capabilities such as equipment, skills and resources. Warnings may fail to reach those who must take action and cannot be understood or addressed their concerns due to ineffective and inappropriate alert means of communication channels Flood prone area. Other reasons appear due to insufficient political commitment, weak there is a lack of coordination and public awareness and public participation among various actors Development and operation of early warning systems. Therefore, appropriate flood detection equipment or plans should be developed continuously alert information before the situation becomes critical. It is mostly due to flood Victims are not particularly aware of rising water level due to continuous rains Midnight. The purpose of the research is to propose architecture to detect a cooperative flood Using GSM via SMS to inform communities and therefore develop a prototype application in the system. The data collected will be according to predetermined level to inform flooding Communities within specific area. The system will use Ozeki Message Server-6 as a SMSGateway application which acts as a tool to send SMS from web application. Will be a gsm modem Used as a medium that sends alert messages from applications residing in computers especially mobile phones.

II. CONCLUSION

Implementation of sensor network for a real-time flood warning system for dam lots. Together Using DigiMesh we were able to implement a mesh network with a synchronous sleep wheel. The sleeping capacity nodes give enough time to recharge the battery using solar Panel. With this approach, we succeeded in 52.4 hours of continuous operation 1200mAh battery. Better results can be achieved by building a more efficient voltage regulator For Arduino since it is one of the main factors for high current consumption in sleep Mode. In addition, a bare bones Arduino can be used, removing unnecessary LEDs and unused pins, This will allow us to reduce overall power consumption. But there is another way to improve The system will change to an event trigger instead of a cyclic approach, which will contain The system in a closed state and it is being explored in case of rain or water. related to The range of nodes, radio antenna must be

located in the rder out of the housing Improving line of sight and reducing dropped packets.

III. LITRATURE SURVEY

Flood warning systems in urban areas have improved a lot in recent years. Arrival of GIS, Radar-Based Precipitation Estimation Using NEXRAD and Radar Systems Internet. The issue of flood warning and warning was brought to the public's attention. After the recent Tropical Storm Allison Flood of June 2001. This flood was reported by NOAAAs the most damaging urban flood in American history, and certainly the most devastating event Further losses in the county affect Beau and Houston with more than \$ 5 billion 50,000 damaged structures. More than \$ 1.5 billion in damages to Texas Medical Center alone Informed with major influences from local community. Conventional gauge based ALERT Systems depend on spatially independent rain gauges. While these systems can provide critical Information, they cannot provide dense coverage of data collection available with NEXRADRadar. With the advent of NEXRAD radar and GIS data analysis systems, it is possible Real-time regional average rainfall over the basin, which can be compared to hydrologic models estimated peak flows in a basin. One such system is since spring, 1998Houston, Texas area. Commissioned by Texas Medical Center (TMC), focuses on the system Brings Bayou to Southwest Houston, and provides TMC with real-time information Flows forecast in Brays Bayou, with visual feedback as a real-time

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