

Disaster Management Using Wireless Sensor Networks

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Abstract : Disasters are defined as a serious disruption of the functioning of a community or a society, which involves widespread human, material, economic or environmental impacts. The number of people suffering food crisis as a result of natural disasters has tripled in the last thirty years. The economic losses due to natural disasters have shown an increase with a factor of eight over the past four decades, caused by the increased vulnerability of the global society, and also due to an increase in the number of weather-related disasters. Efficient disaster detection and alerting systems could reduce the loss of life and properties. In the event of a disaster, another important issue is a good search and rescue system with high levels of precision, timeliness and safety for both the victims and the rescuers. Wireless Sensor Networks technology has the capability of quick capturing, processing, and transmission of critical data in real-time with high resolution. This paper studies the capacity of sensors and a Wireless Sensor Network to collect, collate and analyze valuable and worthwhile data, in an ordered manner to help with disaster management.

Keywords : alerting systems, disaster detection, Ad Hoc network, WSN technology

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