TO STUDY TRANSMISSION LINE FALLING DETECTION BY USING IOT

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ABSTRACT

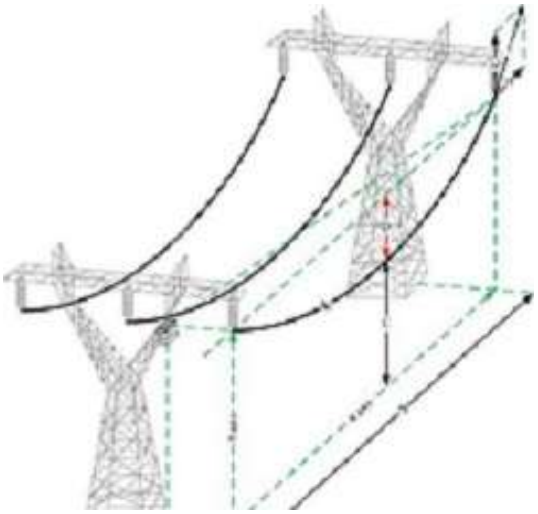
The fault occurred in transmission line is very much dangerous for the locality. In the transmission line there we design a model which is to be detect the fault in transmission line by using iot. Quick fault detection can help protect the equipment by allowing the disconnection of faulted line before any significant damage of the equipment . The accurate fault location can help utility persistent of faults and locate the area where the fault regulary occur. Basically ,fault analysis may be a terribly focusing issue in power grid to clear fault briefly time and re establish power grid as a quickly as attainable on minimum interruption . However when high voltage passes through this transmission line there are many places where manpower cannot go ,because of unsafety. In this paper , by using sensors and Iot we detect the fault detection in the are less fault occurrence but in locality but fault occurrence is more composed to outer transmission line. In our prototype transmission line. This paper represent the fault detection in transmission line due to various falling that can be overcome .

Keyword: ***transmission line , fault detection, internet of things ,transmitter ,receiver***

INTRODUCTION

It is known that when a fault occure in the overhead transmission line system then instantaneous changes in voltage and current at a point of fault generate high frequency .Electromagnetic impulses called as travelling wave which propagate along the transmission line in both direction away from the fault point. Electricpower infrastructure is highly vulnerable against many forms of natural and malicious physical eventswhich can adversely affect the overall performance and stability of it. Additionally the impending need to equip the old transmission line infrastructure with a high performance data commence network that support future operational requirement like real time monitoring and control necessary for many electrical power transmission companies have primarily relied on circuit indicator to detect faulty section of their transmission line However there are still challenge in detecting the exact location of these faults .Although fault indicator technology have provided a reliable means to locate permant faults the technique crew and patrol teams still has to physically patrol and inspect the device for longer hour to detect faulty section of other transmission line. The transmission line getting damaged due to various reasons , at that place or point human cannot went their where damage or fault happened[4] .At that place by using IOT , sensors, microcontroller, auduino etc. we can detected the fault and arranged in manner . At this place the IOT plays inevitable role for falling detection and find out it and repaired it .

1.1 Proposed system: When there are transmitting voltage from three phase then there is falling the voltage but where falling occure we cannot be detect by using auduino we can detect .The proposed system IOT based transmission line stand fall detecting and line detection. Compared to the existing system for fault monitoring, the proposed system fault system is easier to maintain the transmission line. The proposed system has some functionalities which makes it a bit more efficient than the previous existing system such as it has real time monitoring of transmission line for any fault .[7] It also has the capability to inform the nearest power centre. Different approaches could be adopted for dealing with the transmission line failure .



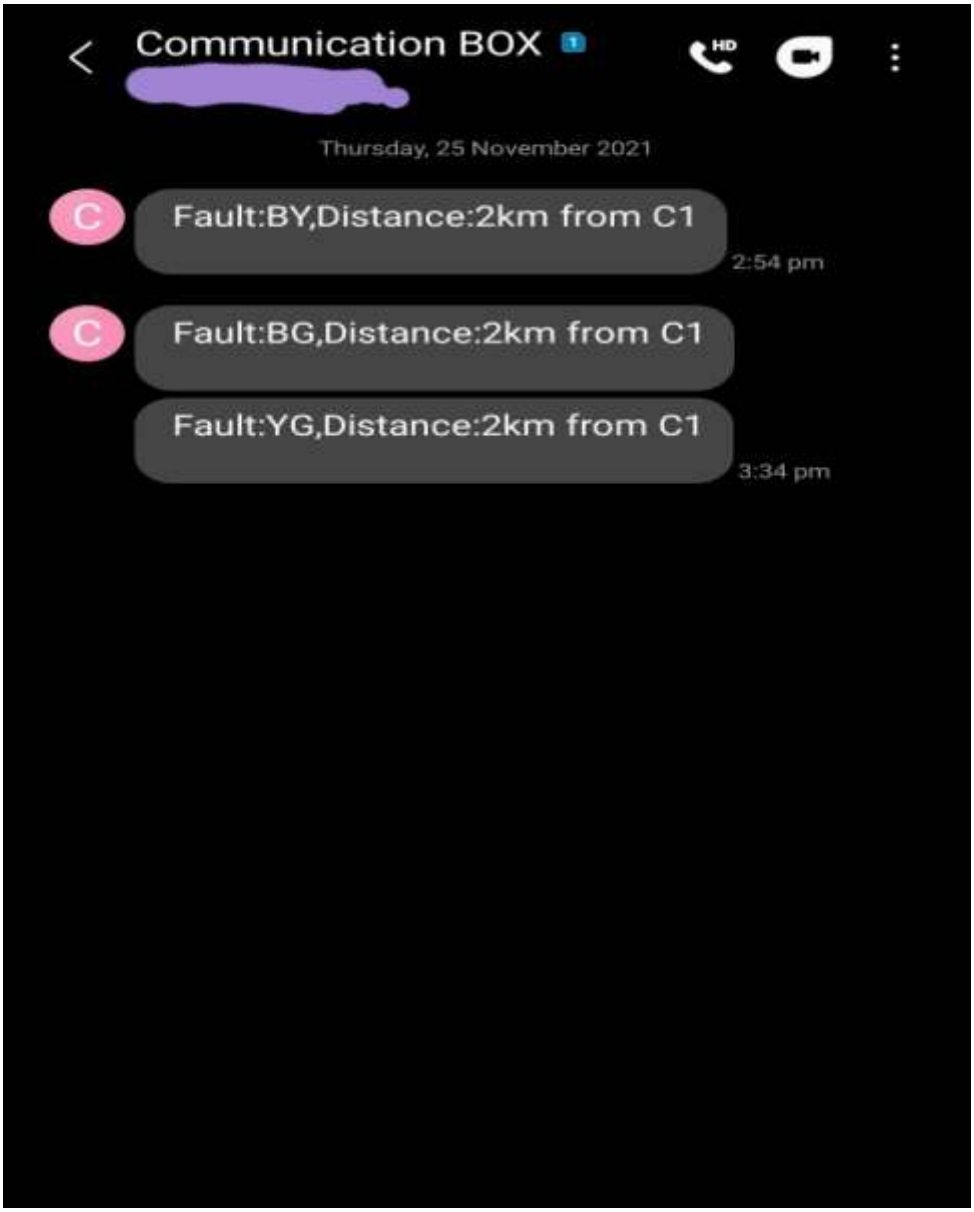
This model is designed in a such a way to solve the problems faced by the consumer.By using such a method ,we can easily detect the fault and esolve it. It is highly reliable and locate the fault in three hase tansmission line and suppose to data stoage. It works on real time so we maintain all data sheet and avoid future Problem in transmission line The short circuit fault at a particular distance in the transmission line is located to rectify the

fault efficiently. The work automatically displays the phase, distance and time of occurrence of fault with the help of Arduino. The benefits of accurate location of fault are fast repair to revive back the power system, it improves the system performance, it reduces the operating expense and the time to locate the faults in the field. The analysis of fault detection and location system of transmission line. Whether it is any type of fault that can be detected and located. When fault get occurs on the transmission line the signal is send to the control room or mobile phone through a GSM modem. The message receive on the mobile that is the fault between pole 1 and 2 and the fault which is symmetrical or unsymmetrical like L-G, L-L, L-L-G, L-L-L, L-L-L-G. The signal that appears on the control room or mobile phone is the L*G or any other type of fault occurred on transmission line. The project is planned to develop an automatic tripping mechanism for the three phase supply system. Output of the project is resets automatically after a brief interruption in the event temporary fault while it remains in tripped condition in case of permanent fault. Any kind of fault occurring in the distribution system results the Bluetooth modules to send instant messages automatically to the nearest user. Bluetooth based microcontroller Fault detection system will serve as a reliable, easy and cost effective solution for monitoring and controlling the electric distribution system.

Here, in this project we have designed a GSM based transmission line monitoring and indication system that sends information of the same to control room via SMS. The implemented system design mainly concentrates on the distribution system. It provides the way to detect the faults such as wastage of energy and power theft. The system continuously monitors various parameters of the system. It also helps to detect the fault at the appropriate time and hence avoids illegal use of electricity. Automatic monitoring, analyzing and recording is done on the PC screen through hyper terminal. The project has continuous monitoring system integrating the GSM communication technology and the microcontroller technology. It also represents the hardware

architecture and the software flow. The implementation of the system will save large amount of electricity and thereby electricity will be available for more number of consumers in a highly populated country such as India

RESULT



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