ABSTRACT

Flood is a terrestrial occurrence when excessive water flows soak up the land. Flood can occur due to over-exposure of water in a place due to heavy rain, river water flows, or water channel degradation. Along with the development of technology an early flood detection systems provide solutions to minimize the impact of flood events. By integrating Raspberry Pi as a microcontroller and LoRa module based on Low Power Wide Area Network (LP-WAN) technology that uses radio frequency as a data transmission medium. From the results of the tests that have been done, the built system can detect water heights and flow speed water on rivers and waterways, and managed to show the location coordinates point in realtime.

Keywords: flood, Low Power Wide Area Network (LP-WAN), radio frequency, LoRa module, Raspberry Pi