

Simulation and performance evaluation of wireless sensor networks applied to flood warning systems in some river branches of Thai Binh province

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Abstract: This topic focuses on researching and simulating the performance of wireless sensor networks to develop an early flood warning system for river branches in Thai Binh province. The context of the topic arises from the need for effective and rapid management of flooding situations to help mitigate damage caused by natural disasters. The objective of the research is to build a flood warning system based on wireless sensor networks to improve the ability to monitor and respond promptly to hydro-meteorological developments. The research method includes both theoretical aspects (studying sensor network algorithms) and experimental aspects (testing system performance at actual locations). The expected results will provide advanced technical solutions, contributing to more effective disaster risk management in the region.

Keywords: wireless sensor network, flood warning, disaster management, monitoring system, practical application