**“Performance Analysis for routine protocols for an efficient data transmission in 5G WSN communication”**

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ABSTRACT

This comprehensive report delves into the intricate realm of 5G Wireless Sensor Network (WSN) communication, scrutinizing the efficacy of routine protocols for seamless data transmission. Formulated as part of the M.Tech program in Electronics and Communication Engineering at Tulsiramji Gaikwad-Patil College of Engineering & Technology, the study navigates through the inherent limitations of WSNs—energy, storage capacity, and power consumption—emphasizing the critical role these factors play in selecting routing protocols. Categorized into data-centric, hierarchical, and location-based protocols, the research employs various metrics to evaluate their performance. The overarching goal is to optimize these protocols based on the analysis, fostering a substantial enhancement in the efficiency and lifespan of WSNs. As we step into the 5G era, this exploration becomes pivotal, contributing valuable insights to the evolving landscape of wireless communication.