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A Smart Vehicular Communication Framework for Seamless Connectivity in WBANs

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Abstract: Uninterrupted data connectivity is considered an essential component in sensor-based remote health monitoring systems. Ensuring uninterrupted connectivity is an important research topic in modern information technology-based medical systems, especially for mobile patients. In the context of patient mobility and changing locations, health monitoring frameworks need to be designed in a way that maintains the ability to seamlessly exchange data in any environment, even within moving vehicles. Maintaining connectivity is essential even when there is a lack of adequate network infrastructure at the roadside. In this study, we propose an intelligent vehicle-communication-based architecture, based on the concept of the "Internet of Vehicles", taking patient mobility into account. The proposed mobility management protocol is able to ensure a continuous flow of specific health information in line with the patient's movement.

Keywords: Remote Health Monitoring; WBAN; Internet of Vehicles; Mobility Management Protocol

