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An IoT-based Health Care System for Elderly People

In a world with an accelerated population aging, there is an increasingly interest in developing solutions for the elderly living assistance. The Internet of Things is a new reality that is completely changing our everyday life, and promises to revolutionize modern healthcare by enabling a more personalized, preventive and collaborative form of care. Aiming to combine these two important topics, this work presents an IoT-ready solution for the elderly living assistance which is able to monitor and register patients vital information as well as to provide mechanisms to trigger alarms in emergency situations. Its effective low-power/low-cost and wireless characteristics turns this solution suitable to be used anywhere and by anyone, in a discrete and comfortable wristband. Experiments demonstrated a good system performance for the implemented functionalities, and regarding the autonomy we obtained an average battery lifetime of 306 hours (around 12 days). For the working range, the system have proved to perform well within a range of 60 meters before the out-of-range warning being triggered.