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Portable heart rate measurement for remote health monitoring system (Conference Paper)

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Abstract


This paper presents a design of **portable heart rate monitoring system** which is part of a project called Home-smart Clinic. Home-smart Clinic is developed in order to connect medical personnel and patients remotely. **Remote health monitoring system** is beneficial to the patients and society where the implementation of such **system** will save hospital bill, waiting time and reduce traffics in the hospital. The prime objective of this paper is to design and develop **heart rate measurement device** for which real time data could be observed by the doctor via internet. History data could also be acquired; therefore the doctor can interpret the trend of the data to identify the conditions of the patients. In the proposed **health monitoring system**, **heart rate** and body temperature wireless sensors were developed, however this paper only focus on **heart rate monitoring system**. The main components involved in this project are pulse sensor, microcontroller (Arduino with Ethernet shield), and wireless communication device (Xbee). The **portable heart rate measurement device** was tested to a group of voluntary students. Results showed that the **real-time heart rate reading** successfully monitored locally (at home) and remotely (at doctor's computer). © 2015 IEEE.

Author keywords

Arduino; **health monitoring**; **heart rate sensor**; medical deviceISBN: 978-147997862-5 **Source Type:** Conference Proceeding **Original language:** EnglishDOI: 10.1109/ASCC.2015.7244405 **Document Type:** Conference Paper**Volume Editors:** Selamat H., Ramli H.R.H., Faudzi A.A.M., Rahman R.Z.A., Ishak A.J., Soh A.C., Ahmad S.A. **Sponsors:** Malaysia Convention and Exhibition Bureau (MyCEB), Malaysian Palm Oil Council (MPOC), Ministry of Tourism and Culture Malaysia, Sabah Tourism, Visit Malaysia Year 2015 **Publisher:** Institute of Electrical and Electronics Engineers Inc.

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