

Abstract: Design and Implementation of a Wearable ECG System

Byungkook Jeon, Jundong Lee, Jaehong Choi
*Dept. of IT, Dept. of Multimedia Eng., Gangnung-Wonju Nat'l University,
Wonju Campus, 220-711, Korea
{jeonbk, jlee }@gwnu.ac.kr, inform1@hanmail.net*

Abstract

In this paper, we design and implement a wearable ECG (electrocardiogram) system with the smartphone for real-time monitoring, self-diagnosis and remote-diagnosis to the chronic heart disease patients before sudden outbreak. The smart shirt with ECG can be worn by inpatient or outpatient and monitored in real-time. Healthcare profession can access to patients' data in real time wirelessly with smartphone. Especially this system can useful for senior citizen who lives alone or has disability. Therefore, this system can be utilized for the remote medical system to assist the elderly patients as well as self-testing diagnostics or physicians to diagnose diseases of the circulatory system.

Acknowledgment

This research was supported by the MEST (Ministry of Education, Science Technology, the MKE (The Ministry of Knowledge Economy) and the KIET (Korea Institute for Advancement of Technology), under the 2nd HUNIC (Hub University for Industrial Collaboration) support program.