Abstract

Around the globe, a substantial number of people suffer from mild versions of a cardiac disorder but still lead an active lifestyle. According to the World Health Organization (WHO), it is estimated that the number of people who die from these Cardiovascular Diseases (CVD’s) will increase and reach up to 23.3 million by 2030 [1]. For this faction of people, long term monitoring of ECG is recommended. Moreover, long term monitoring is also a necessity for an improved post-operative life span of a cardiac patient who may have undergone a cardiac surgery. This paper proposes the design of a wireless, locket sized Electrocardiogram (ECG) monitoring device, which is meant to be used by heart patients. The
Design and Modeling of Wearable ECG (Electrocardiogram) Monitoring Device for Heart Patients

device is capable of acquiring patient's ECG continuously and dynamically transmitting it to the patient's mobile handset, which is interfaced to the device via a wireless channel like a Bluetooth. ECG received on the patient's cell phone is processed and compared with existing ECG plots and abnormality if detected, a notification message is sent from a patient's cell phone to the cell phone at the medical-center (hospital) and thus necessary treatment can be prescribed for the patient. An Android application is present in the cell phone which performs this task.

References


**Index Terms**

Computer Science  
Signal Processing

**Keywords**

Electrocardiogram  Cardiovascular Diseases  Bluetooth  Android  Cell Phone  Qrs Complex.