HeartBook & SmartHelper

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Nowadays, 17,500,000 people die due to heart disease every year in the world. Also, 40,000 elderly tumble and get hurt every year in Hong Kong. We want to help all the people in need. Therefore, we designed and developed our integrated system, HeartBook & SmartHelper (include smartphone APPS, sever-sided programs, hardware sensors). With our system, heart disease patients and elderly heart beating can be centrally monitored. Rescues can be sent to users at once whenever they have trouble. Also, we self-designed an ASP.Net website, to let users browse and download their data for further analysis (e.g. medical and training analysis). Major Functions: 1. HeartRate Monitoring System: 1.1 Normal situation, 1.2 Irregular Heart Beating, 1.3 No Heart Beat 2. Tumble Detecting and Rescue Calling Function 3. Obstacles Detecting Function 4. Voice -triggered Rescue Calling Function 5. Instant Monitoring of users by the Central administrator 6. Toast Notification 7. Users can browse and download their data from the HeartBook Server (ASP.Net website) for further analysis. Principle: In this system, we use Bluetooth SPP to transmit data from hardware sensors to WP8. Then WP8 use Wi-Fi or mobile network to transmit information to Server by calling WCF services in server. Also, all the data will be stored in MS SQL Server, for admin to query users' data by using the APPS in Server. Sinoatrial Node will generate electrical impulses that trigger cardiac contraction, and hence to make heart beatings. So, our Heart Rate Transmitter (sensor) can detect the pulse and digitize into digital square wave and transmit to smart phone (through Bluetooth). We heartedly believe that, with our innovative system, healthier and better life can be easily achieved.

Awards Won: