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A Non-Invasive Remote Health Monitoring System Using Visible Light Communication

In this paper a non-invasive Electroencephalograph (ECG) monitoring system based on visible light communication is presented. An ECG kit is connected to Arduino board which uses Wi-Fi shield to transmit the ECG signal wirelessly to computer. A prototype of visible light communication (VLC) link is used to transmit the ECG signal. The received ECG signal over VLC link is compared with the transmitted ECG signal and error is calculated. Result shows that maximum 3% error in received signal at a distance of 2 meter, which opens a new path of using VLC channel in remote health monitoring system.