**Problem**

Wireless devices such as smart-watches, headbands and belt as well as sensor networks are one of the most promising developments which can be used to ease the process of monitoring the conditions of a human body. Although, such advancements cannot be attained for various reasons: the traditional methods used for such devices to communicate (especially using Bluetooth) can pose a danger to the body cells; lack of a secure channel for communication; and the limitation of power for these devices which is usually short-term.

**Solution**

To solve this problem, this proof-of-concept project proposes a system which uses a low frequency signal alongside magnetic fields passing through the body (as a channel) to enable communication between any two devices installed on the human body. Some of the most important advantages of this system is that, the information relayed in form of magnetic fields is capable of penetrating freely through the body tissues and therefore the communication can be achieved with lower signal loss (as a result of obstruction), and less power consumption. Besides, by using the human body as a channel of communication, the medium is less vulnerable to leak information in that, the data transmitted from one part of the body to another cannot be radiated off the body hence providing a secure channel.