

**Wireless body area network's application for motion detection
based on Android smartwatch
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1. Summary:

1.1. Motivation:

The main purpose of this paper is to introduce WBAN theory and implement two different sensors in a smartwatch to transmit data to smartphone for further approach with accurate measurements.

1.2. Contribution:

This paper is a highly recommended one in terms of someone who needs specific comparisons when working with WBAN embodied with specifically healthcare WBAN technologies. We can easily use our smartphone to keep track of a patient's orientation and acceleration.

1.3. Methodology:

The authors in this papers proposed a method using two different sensors which are Accelerometer and Gyroscope. This sensors are implemented in a common smartwatch of present times. This different sensors instead of nodes in BANs are accurate in their measurement and send data in the smartwatch application as raw axis data as coordinated in X and Y axis. These data are then send to a smartphone application using Bluetooth and then the application convert in into graphical form to display it. Doctors can use these graph as per the need of the patient's diagnosis and so on.

1.4. Conclusion:

They proved that the sensors can transmit data which are attached to body via a smartphone.

2. Limitations:

2.1. First limitation:

The first limitation is the occurrence of faulty sensors. The Gyro or Accelerometer sensors may be faulty built-in the smartwatch at first place. These require double, triple or multiple cross checks from the smartwatch manufacturer and further for the hospital administration since this is really sensitive for diagnosing a patient.

2.2. Second limitation:

The second limitation is code complexation. The application might miscalculate raw data which will give wrong graphs. Moreover, smartphone app can also wrong calculate raw data. Therefore, coding the app requires sincerity and frequent maintenance if needed.

3. Synthesis:

The paper showed that the sensors with the Bluetooth can transmit and receive data suing the WBAN for motion sensing specifically by two different sensors which are Gyro and Accelerometer in this case.