ABSTRACT

The development of wireless sensor network (WSN) applications for wireless sensor networks are also more varied. The presence of this new technology makes it easier to do the monitoring application, particularly human monitoring activities. By applying the wireless sensor network monitoring human activities, then we will be more easy to understand the characteristics of the human body based on the activities conducted, so that it can produce a system that can monitor human activities and to know the characteristics of human body movement.

Research on wireless sensor network is designed to be able to monitor human activities in a way that the vibration caused by movement of the body. Therefore, in some human body mounted vibration sensor or accelerometer, the sensor readings sent directly to the base station in a single hop.

From the results of the measurement and analysis of data indicates that the wireless sensor network that has been built to monitor the human activities, among other activities, walking normal, walking climbing stairs, walking down the stairs, writing, and typing, reading sensor results in line with the activities conducted. Activities related to the Power Spectral Density, the more the vibration caused by an activity, then the greater amplitude PSD. From the results of the measurements, most amplitudo PSD is 402.59 mg / Hz in the node 3 activity walk down the stairs.

Keywords: Sensor, Accelerometer, single hop
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