Prevention Support System for Baseball player’s throwing injuries with using Radio Small Acceleration sensor

Some baseball players have their shoulder and elbow injuries cause of the disorder of the throwing form and an overwork. However it is difficult to recognize their throwing form and number of throws. Moreover, there is no system to support them users. This research supports them to improve their from and to take a break by using the radio small acceleration sensor which you can check your throwing form and number of throws.

Scenario
Player T hardly practices baseball everyday. But he practices with anxiety for his arm (shoulder) had injury. Therefore by using this system, he could check his throwing form, number of throws and what he did in the practice. Only putting sensor device on his arm, he could practice as usual.

Method of data representation
During practice
1. When ten times of users throw it, blue LED turns on.
2. The more bad throwing motion, LED turns red. Encourages users to sound even better throw.

After practice
Display multiple charts for the content of training history. Number of pitches, speeds, and chart the changes in elbow angle, it is possible to compare historical data.

Method of data acquisition
Throwing form usually change when you are tired this device detect throwing form by calculating angle of elbow from acceleration data.

Hardware construction
A sensor that user wears calculates their number of throw, and angle of elbow. Then send to a server. Doing of every practice are collected in DB, showed up at display.