

A Development of Wireless Simultaneous Heart Rate and Movement Performance Group Monitoring Equipment in Futsal

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Abstract

This innovative research aimed to determine the conceptual developing for wireless network simultaneous heart rate and movement performance group monitoring equipment in Futsal. The programmed Futsal tracker presents in integrating various components of sports science to facilitate sports performance analysis both in techniques and tactics during training and competition in real-time and approaches in adjusting techniques and strategies.

The system was designed and developed to be used in wireless network and shown in 4 player's heart rate and position, including movement performance group monitoring pattern in Futsal team during competitive trails in first step. Innovative integrating tools were heart rate sensor by Polar H7 and motion sensor with Beacon, both Bluetooth low energy to send data information to main computer using C-sharp with visual studio 2015 professional.

Conclusion, this wireless network developing system was showed both parameters in player's heart rate and position at the first step. KBU sports tech team, Faculty of Sports Science, was also competed to *SPORTS SCIENCE INNOVATIVE contest 2015* via the conceptual developing system in Futsal tracker for sports performance analysis model, resulting in the 3rd champion of a new innovative category. This implies that innovative Futsal tracker analysis model could be utilized to provide sports professional coaching and planning for training and competition, involving applied technology to evaluation of effective and efficient sports team.

Key Words: Wireless heart rate monitoring/ Wireless movement position monitoring/
Futsal tracker programmed software.

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