Fitness system using IoT technology

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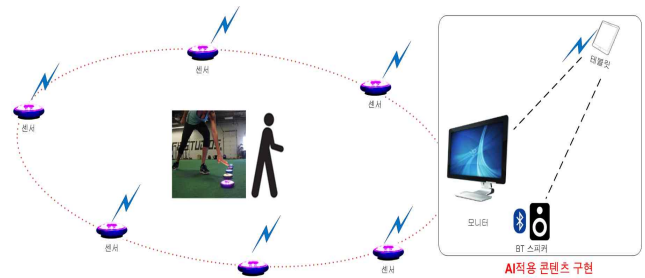
IoT 기술을 이용한 피트니스 시스템

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Abstract

The entire system consists of a fitness sensor group, a tablet that operates the entire system, and a monitor and a Bluetoo[th speaker used as output devices.

1. Introduction

The overall system configuration consists of a fitness sensor group, a tablet operating the entire system, a monitor used as an output device, and a Bluetooth speaker. Service is possible by combining sensor group and IoT application content. It also functions as a platform that continuously provides new content.

2. Fitness device

The fitness sensor provides four functions. First, it detects by installing an IR sensor and an impact sensor as a sensor input. Second, it is the LED display function. Third, it provides a bus output function, and finally, a tablet and wireless communication function. IoT-applied content is implemented as an application on a tablet. IoT technology is applied to the game for the purpose of improving the existing cognitive function. Contents considering age and health status, and development of personalized features that facilitate automatic setting of environment. Development of game contents for seniors to improve cognitive function using reinforcement learning. It is a fitness sensor fusion type game content development for seniors. It can be conveniently used in welfare institutions, silver towns, and nursing hospitals for the prevention of dementia. Figure 1 shows the development and verification of a fitness system using cost-competitive IoT-applied content and sensors.

[Fig 1] Fitness system configuration diagram using IoT technology

Reference

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