

Automatic Kinesimeter – the ‘Smartization’ of the Human Exercise Devices

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⇒ Mechanical ICT integration—customized quantitative exercise management platform technology

Client / Market

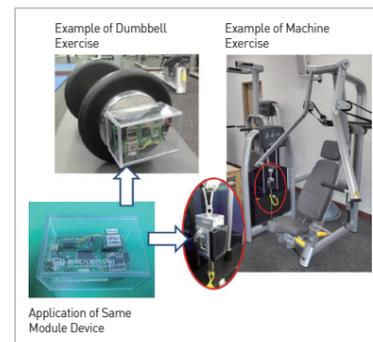
- Ordinary person, patient needing remedial exercise, sports goods maker, fitness gym, sports facility, hospital

Necessity of this Technology

- In some cases, a trainer or sports curer directs and records exercises when exercising at gyms or hospitals, but most of the time, a person randomly decides on the type and quantity of exercise without a systematic management.
- It is difficult to record how and how much a patient with an exercise prescription exercised properly.
- High-priced automatic exercise equipment with a kinesimeter are being released, but due to inconvenient use and a high price, they are not supplied to general sports facilities.

Technical Distinctiveness

- At a low cost, a systematic and precise exercise management is possible.
- The public and professional athletes and patients needing remedial exercise can exercise with a systematic exercise prescription and treatment at a community sports facility.
- The records of exercise can be used as motivation.
- This device can be attached to an existing sports equipment when needed.
- By linking with the member management system, the members can check their exercise history online on their own and receive additional coaching.
- Can be provided with a customized exercise coaching program from professionals all over the world
- Professionals, as supplier of exercise coaching programs, can establish reputation and promote their business and related products.
- Extensive data on exercise programs by race, age, stamina, body type, medical history and sports and the actual result of exercise performance can be used for academic, commercial purposes.
- Most of existing automatic kinesimeters are built inside the sports equipment, but this technology allows the device to be attached on various equipment to utilize existing infrastructure.
- There are many kinesimeters for aerobic exercises using u-health technology, but there are barely any kinesimeters for machine exercises.



DESIRED PARTNERSHIP

Technology Transfer

Licensing

Joint Research

Other

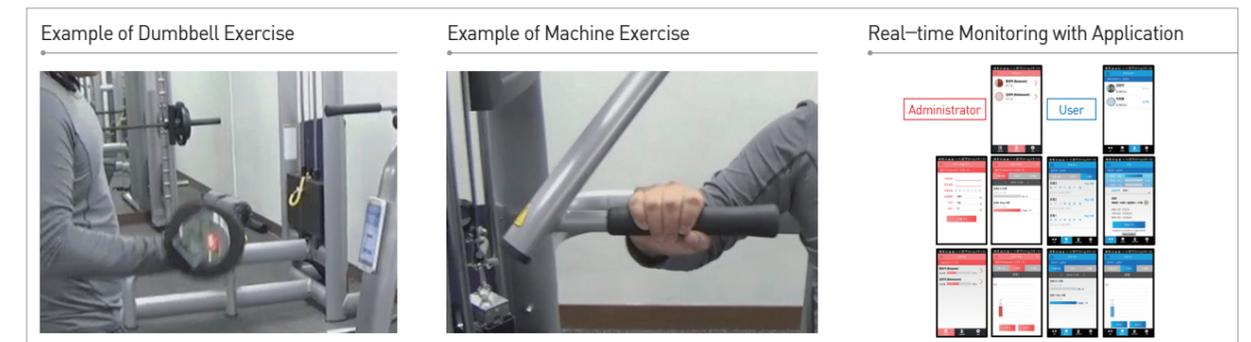


TECHNOLOGY READINESS LEVEL [TRL]

Research, basic explanation | Project concept or idea development | Technology idea verification | Prototype development | Trial product production/evaluation in similar environment | Pilot field demonstration | Development and optimization of commercial model | Commercial product demonstration | Mass production and initial market launch

Excellence of Technology

- Developed a sensor module and a wireless transmission for autonomous weight exercise equipment like dumbbells and machine exercises as well as an application to operate the sensor
- Verified the accuracy of the sensor module using the precision measurement equipment, and through the demonstration, successfully conducted an experiment of checking the prescription and execution of exercise real-time



Current Intellectual Property Right Status

PATENT

- Rehabilitation Exercise Managing System and Managing Method Using the Same (KR1510088)
- Online Information System for Therapeutic Exercise (KR1570984)
- Barbell Exercise Measuring Device (KR1551343)
- Barbell for Managing Quantity of Exercise and Exercise Managing System Having the Same (KR1629723)
- Tension Measuring Apparatus (KR1673146)
- Tension Measuring Apparatus (KR1719573)
- Device for Discriminating Dumbbell Exercise and a Method by Using the Same (KR1719572)