Makoto Lab.
〜Welfare supported by ICT〜

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Introduction

- Members of our Lab.
  - 30 undergraduate students
  - No grad students

- Purposes of our lab.
  - Development of computer software for the disabled and the elderly
  - Development of human resources by PBL: Project-Based Learning method.
Core competences #1

- Sensor control technique

- Kinect
- Wii Remote
- Wii Board
Core competences #2

- **Software developmental technique**
  - Digital Signal Processing
  - 3DCG
  - Computer Vision
  - Speech Recognition
  - Speech Synthesis

- **Experienced platforms**
  - Windows
  - iOS
Introduction of Products
3D sound games for the visually impaired by using VAD (Virtual Auditory Display)

“BBBeat” : sound game like “whack-a-mole“

“Sound Racer“

VAD technology was developed by Suzuki Lab. of Tohoku University
WR-AOTS (Wide Range-Auditory Orientation Training System) with VAD

WR-AOTS can build virtual buildings, roads, and cars on a playground of a school for the blind. The visually impaired children’s walking skills can be trained safely in this virtual environment.

Download: https://staff.aist.go.jp/yoshikazu-seki/AOTS/WR-AOTS/index.html
Game for the elderly “Drop Stars”

Exercise Therapy System by using MS Kinect
A mentally challenging game with aerobic exercise bring about an activation of cognitive function (NCGG).

We now improve the Drop Stars game by using technology of speech recognition and gesture recognition.

Mentally challenging game (ex) Easy numerical calculation

Aerobic exercise (ex) walking
Thank you for your attention!

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