

Graduate School of Science and Technology Master's Thesis Abstract

Laboratory name (Supervisor)	Interactive Media Design (Hirokazu Kato (Professor))		
Student ID	1911318	Submission date	2021 / 1 / 22
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Thesis title	Music Video Game for Finger Motor Skill Training on Smartphone スマートフォンでの指の運動技能訓練のための音楽ビデオゲーム		
Abstract			
Hands and fingers have important roles in our lives. And hand rehabilitation is needed when they can't fulfill their roles. Much conventional rehabilitation is simple and the patients can't keep their motivations. To solve this problem, some researchers have proposed the music supported therapies. And their effects have been confirmed. But only most of the research is based on computers or VR devices, we need a mobile and portable training system that allows patients to train at home. In my research, I developed a music game for finger motor skill training on smartphones. I develop the finger motor training device can measure force to control music game. In order to achieve long-term rehabilitation, the music can be selected by the patient, and the music score can be edit by caregivers who have suitable difficulty. Furthermore, in order to make the music score easy to understand, I developed a fake hand animation user interface. The result of the experiment showed that fake hand animation user interface makes the paly more accurate.			