Write-On Stylus App

California State University, Los Angeles
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Introduction

- **Group:**
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Problem

- Concerns in preschool writing technique
- Physical problems in incorrect writing techniques

Although this girl uses a tripod grip on her pencil, her ring and little fingers are held stiffly out to the side. This is very tiring and can lead to aching hands while writing.
What Is Write-On?

- tablet/handheld device accessory
  - teach proper pencil holding technique
    - imitate pencil holding
    - limited hand strength
    - muscle memory
- mobile application to be used with Write-On
  - exercises
The Goal

A = radial cross palmar grasp; B = palmar supinate grasp; C = digital pronate grasp; only index finger extended; D = brush grasp; E = grasp with extended fingers; F = cross thumb grasp; G = static tripod grasp; H = four fingers grasp; I = lateral tripod grasp; J = dynamic tripod grasp.
Technology

Productivity
Github
Slack
Google Drive

Development
Unity3D
Visual Studio
Blender
Bluetooth LE
C#
Requirements

● Receive and interpret data from bluetooth device
● Use data from touch events to enforce correct technique
● Create multiple games and level generation for them
Our Kid Game App-Inspired Design Philosophy

- Simplicity
- Ease of use
- Gamification
Design

DFD - 0

WSA / Tablet

BT Stylus

User
Design

DFD - 1

Scene Main-Activity

Scene Exercise

Profile Folder

User Data

Current User Data

Updated User Data

Updated User Data

Updated User Data

User Touch Data

BT Stylus Data
Design Implementation

Goals for Application Design and Implementation:

● User Friendly
● User Orientated
● Unique and Beneficial experience
● Mix of Educational and Entertainment value
● Clear indication of progress
- Simple gameplay
- Variation of space
- Simple Menu
- Easy start up
Challenges

- Palm Rejection for Android
- Bluetooth connection to iOS
- Level generation for different types of games
Fall Accomplishments

- Requirements gathering
- Discovery of application limits
- Basic game prototype
- Persistent data for user profiles
- Menus
- Unity proficiency
Questions?