Smart Presenter App

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Problem Statement

Create an app to control the mouse on the host laptop via WiFi to give a presentation.

Abstract

Remote presenters are an essential part of any presentation session. It allows the speaker to walk freely over the stage while controlling the slides. Traditional presentation controllers are the remotes connected to the host computer via Bluetooth. The controllers only have access to change the slides. Sometimes these remotes have a laser, which is used by the speaker as Pointer.

Introduction

Smart Presenter is an Android application that is designed as an alternative to the physical remote controller for presenters. The application can also be compiled for IOS devices without significant changes. As the saying goes, Android can be run on anything, Smart Presenter application can be compiled for dedicated hardware.

Features

The smart presenter app provides a preview of the current, next, and previous slide on the phone along with speaker notes for each slide. The app controls the pointer on the screen as well as the transition to the next or previous slide. There is also a timer to remind the speaker of any time restrictions. The speaker can also click a picture on the phone and the picture will be displayed on the main screen. The focus mode allows the speaker to make the entire screen dark except for the area under the pointer which he wants to emphasize.

Implementation details

The application is developed using the React Native Ecosystem. To allow for portability over Android and IOS Operating systems, I have used the Expo interface. For networking, I have used WebSocket technology for bilateral communication between the host system and application. The Host system (server) has a python web socket server. The python application has control over the keyboard and mouse of the most system. I have also implemented the proof of concept version, where instead of using a joystick, I used the gyroscope for controlling the motion of the pointer on the screen.

Milestones

I was able to complete the milestones in the development of the application as promised in the interim report.
I was able to include additional features including Notes, timer, and upload images in the application.

Conclusion

In the last two months span, I created a stable application to replace the physical remote for controlling presentations. I was able to include features that will be beneficial to any speaker using the application.