MICHIGAN STATE UNIVERSITY

Project Plan

Android Emulator for EA Games

The Capstone Experience

Team EA

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From Students…
…to Professionals

Project Overview

- EA develops games for all platforms with mobile development becoming a priority.
- Looking to eliminate the barriers to play cross platform.
- Streamline the process to allow the games to be played in the simplest and quickest way possible.

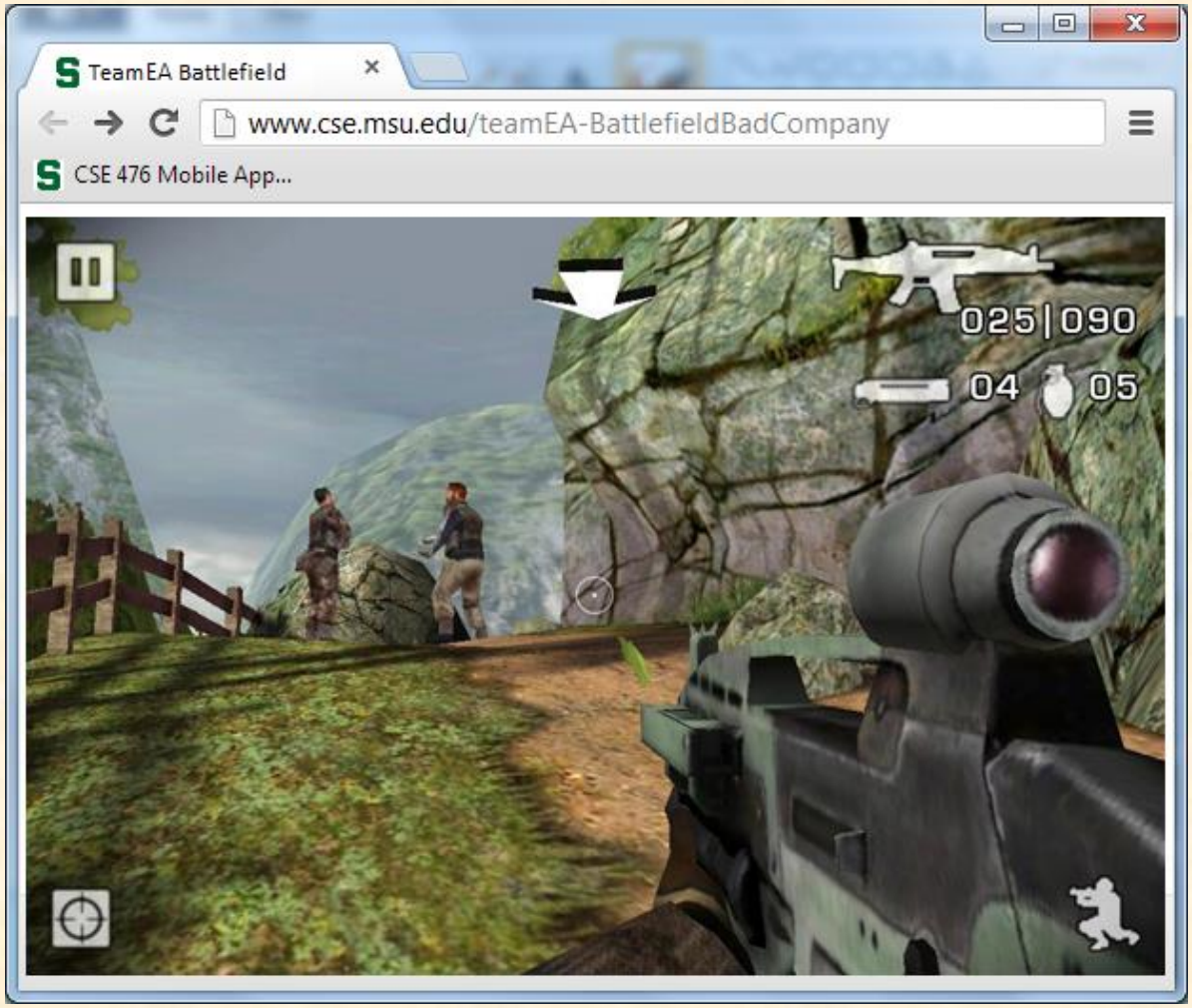
Functional Specifications

- Play your games how you want.
- Allow user to play EA games from their PC.
- Control the EA games with Android Device.
- Different control schemes available for different games.
- View the games to play over the web.

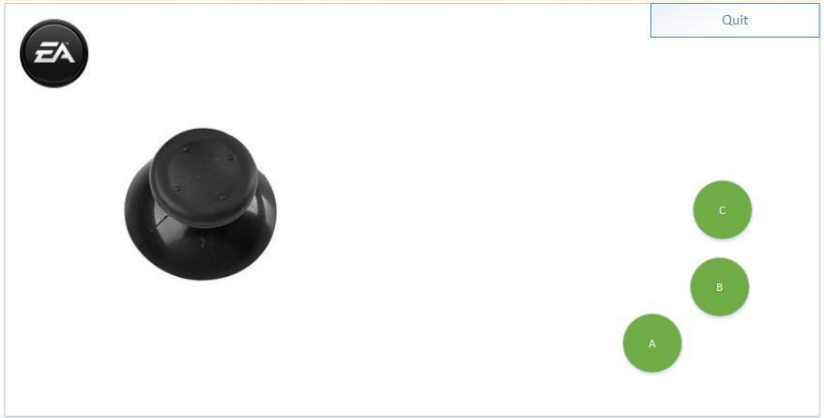
Design Specifications

- Server will be running the emulator.
- Games will be streamed to the home PC.
  - Website with search in order to find the apps you want.
- Emulator controlled wirelessly by Android device.
  - Different control schemes for different games.

Screen Mockup: Video Streaming



Screen Mockup: Control Schemes



HTML5 Interface of Gamepad
To Control App

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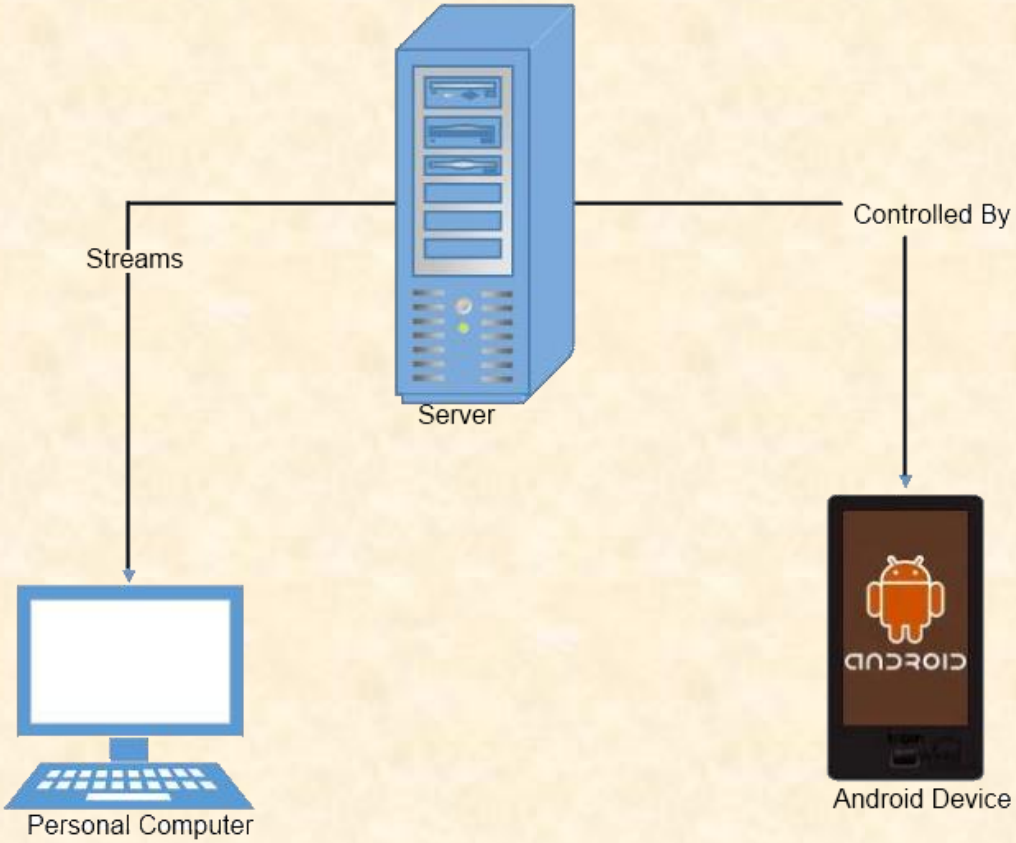
Technical Specifications

- HTML5 Webpage imbedded with JavaScript and PHP.
- Batch script to start emulator and game.
- HTML5 Mobile Web Application for Android Device Controller
- Intercommunication between Server-Streaming Webpage and Server-Android Device through internet transport protocols.

System Architecture



System Components

- Software Platforms
  - Windows Server 2012 Standard
  - GitStack
  - Android SDK
- Technologies
  - JavaScript & PHP
  - HTML5
  - TCP/IP & UDP/IP

Testing

- Testing for the device as a controller
- Testing different control schemes
- Test on different devices/resolutions
- Testing the emulator to successfully run games
- Testing streaming over WiFi

Risks

- Lack of experience on building HTML5 web page and programming Android based App.

➢ Mitigation: Research and Investigate relative fields with open sources.

- Need different control interface for playing different EA games.

➢ Mitigation: Comparing and finding similarities, try to build commonly used control interfaces.

- How to control the emulator on PC with mobile Device?

➢ Mitigation: Build connection between PC and Android Device initially, then test the “Click and Response” between the two, finally consummate the whole control system.

- Lagging and Delay always happen during streaming.

➢ Mitigation: Using appropriate internet transfer protocols for the data stream. If needed, using a lower resolution to showcase the app.