

Project Proposal – CS 2063

Brandon Franklin
3532332
bfrankli@unb.ca

Shawn Norrie
3536830
snorrie@unb.ca

Application Overview

The application we selected to build is an emulation of an Etch A Sketch, with enhanced features taking advantage of the digital nature of the app. This application is intended to serve an entertaining purpose. The target audience focuses on young adults with preexisting knowledge of the Etch A Sketch as well as teens to young adults with an inclination for art or “doodling”. The primary device interaction will be a tilt-to-move “pen” that will draw as it moves in a colour of the user’s choosing. Additionally, the canvas will be clearable using a shaking gesture similar to a physical Etch A Sketch.

Purpose

Few apps attempt to emulate this popular toy, and those that do opt for digital dials rather than using native sensors such as the gyroscope. The inclusion of functionality common among other drawing apps while also providing a less cluttered interface (as digital dials will not be presented) will provide improvements over other apps. This application is best implemented as a native application as the primary use case for the application does not require any networking functionality. Additionally, the app is targeted at short to medium length playtimes anywhere. Such a system benefits from the always available nature of a native app as well as their quick start time over browser navigation and deep integration with the systems sensors (such as the gyroscope).

Functionality

Within the app there are two primary interactions the user will perform: tilting to move the digital pen and shaking to clear or undo. Tilting will be provided by the device’s rotation vector and shaking will be provided by the accelerometer. The ratio of tilt angle to pen speed will be configurable in user settings. The application will require a minimum tilt angle before beginning to move the pen so as not to move accidentally, called a deadzone. Shaking the device will either clear the screen or undo the last action.

Secondary functionality provided by the application will include features found in other drawing apps. The user’s pen colour will be selectable using a colour pallet shown via gestures. The user will also be able to zoom in and out on the canvas which will decrease their pen speed to provide more accuracy. Should time permit, layers may be added to allow users to draw in separate overlaid spaces. Finally, drawings will be able to be saved and loaded from the device as images (or as a layered format should layers be implemented).