*Florida International University*

*School of Computing and Information Sciences*

CIS 4911 - Senior Capstone Project

Software Engineering Focus

Feature Document

User Story #**848**

**Team Member:**

Jorge Nonell. Eric Aguiar, Alex Karpis, Chris Naranjo

**Product Owner(s)**:

Francisco Ortega

**Mentor(s)**:

Francisco Ortega

**Instructor**: Masoud Sadjadi

**User Story** [**#848**](https://fiu-scis-seniorproject.mingle.thoughtworks.com/projects/multi_modal_interactive_paint/cards/848) **Menus and Layers Abstracted out**

As a developer who is simply handling input from a device I would like to not have to worry about how graphical rendering is handled in this application, so that I can focus on my job of handling input and code is more straightforward.

Acceptance Criteria

* Menus drawn outside of device handlers
* Framebuffer objects no longer need to be handled directly by programmer, they just need to throw shapes at the illustrator/canvas object

**Use Case** [**#848**](https://fiu-scis-seniorproject.mingle.thoughtworks.com/projects/multi_modal_interactive_paint/cards/848) **Menus and Layers Abstracted out**

Use Case:

A developer should not have to know or worry about the way the drawing application works in order to add or modify logic to handle input from a new device.

Details:

Actor: developer

Pre-conditions:

* Project working on VS2015

Description:

* If I want to add a new device, I can handle the input in a unified way across all devices.
* When writing a device handler I should not need to know how the application draws or renders.

Decision Support:

Frequency: Often. Developers need to easily understand code

Criticality: High. Enables developers to work more efficiently

Risk:Low. Team members need to get used to new structure

Constraints:

Reliability: Very Reliable.

Performance: There may need to be performance improvements

Supportability:

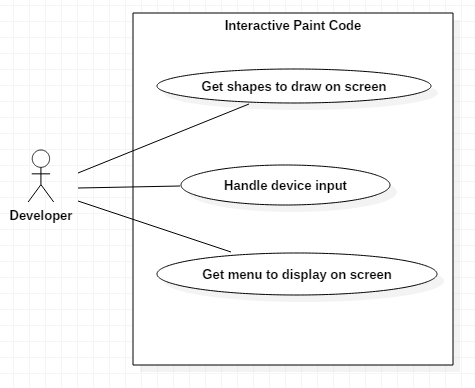
Must work with ACER Multitouch, Leap, RealSense and Eyex

Modification History:

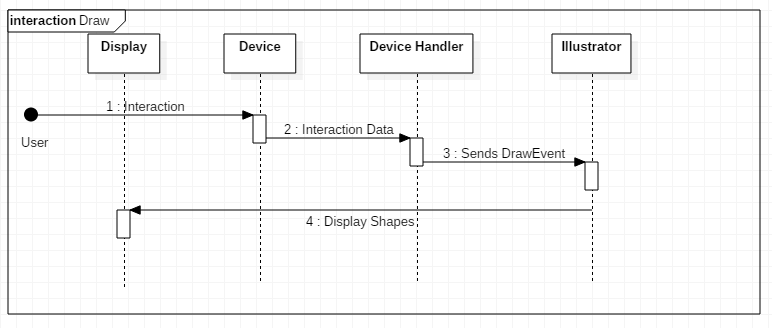
Owner: Jorge Nonell

Initiation date: 06/19/2016

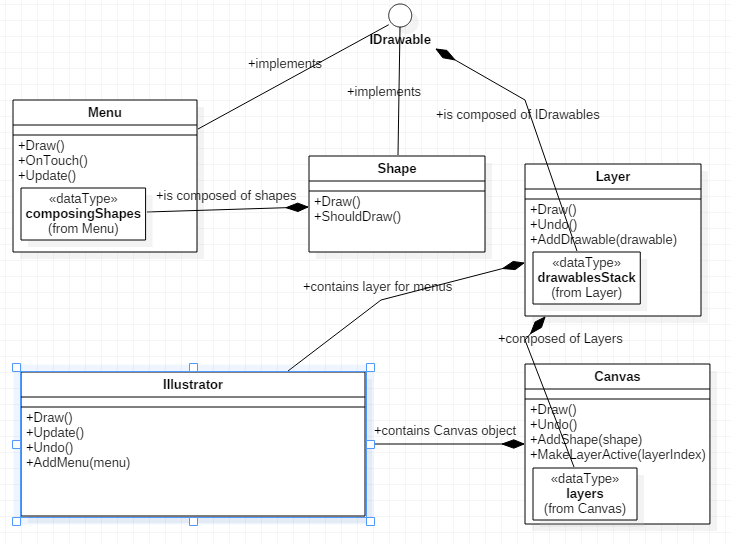
Date last modified: 06/19/2016

**Use Case Diagram**

**Sequence Diagram**



**Class Diagram**



**Unit Test**

Sunny Day Tests

Test Case 1: Devices Still Work

Test Purpose: Ensure that user can still use the devices to draw on screen after the window is resized

Test Setup:

⦁ run program

Test Output:

Every line drawn correctly

Expected Output:

After testing all integrated devices, i.e. the RealSense, Leap and Eyex can still contribute to drawing, the screen should draw correctly

Test Case 2: Window is responsive

Test Purpose: Ensure that user can expand the window and have the menus and touch points scale to size.

Test Setup:

⦁ run program

Test Output:

Any shape can be drawn correctly anywhere on the screen and the menus resize according to the size of the window. Works but there is a memory issue with the menus, which causes pixel fragmentation.

Expected Output:

After testing all integrated devices, i.e. the RealSense, Leap and Eyex can still contribute to drawing anywhere on the screen correctly. The menus are responsive to the screen size.

**Integration Test**

Devices can still be used to draw in the application, i.e. the RealSense, Leap and Eyex can still contribute to drawing. The menus are responsive to the screen size.