# Milestone 3
## *Singularity Software*
April 13, 2012

## Test-Driven Development

### Framework

We used the Silverlight Unit Test Framework made available by Microsoft at
http://silverlight.codeplex.com/releases/view/78435. We chose it because it is designed
by the same people who work on the Silverlight runtime and was therefore easy to inte-
grate into our solution. This easy integration kept the amount of time required for TDD
setup low and allowed more time to add tested functionality to the emulator.

### Effects on Development

We found that test-driven development (TDD) didn't slow down our development process
significantly. Because we're still unfamiliar with many of the intricacies of the Sifteo API,
there was and continues to be a lot of time spent simply understanding what each API
class does before we start to implement it. In this regard, TDD was helpful because it
forced us to understand each class part-by-part as we implemented the tests for it. This
in turn tended to ensure that we understood each class in small increments instead of
struggling to comprehend the entire class all at once.

TDD didn't really have an opportunity to improve our design decisions because most
of the development we're doing at this point directly mirrors the Sifteo API structure.
Mainly, the process helped us ensure more complete coverage of the API.

## Sprint 2 Backlog

The following pages show the backlog for the previous sprint. Any remaining unfinished
tasks from this sprint will be finished up over the coming weekend, and the next sprint's
progress will begin following the completion of these unfinished tasks.

| Backlog | (None) | In Progress | Completed | Summary |
|---|---|---|---|---|
| S-01011 ~~Emulation: Implement public Cube methods (see Sifteo API)~~ (Accepted) Ethan 1.00 | | | ~~Write tests for methods in Cube class~~ Ethan 0.00 / ~~Implement Cube class methods~~ Ethan 0.00 | Test Results: To Do: 0.00 |
| S-01012 Emulation: Implement public Color methods (see Sifteo API) Ethan 4.00 | | Write tests for Color class Ethan 0.00 / Implement Color class methods Ethan 2.00 | | Test Results: To Do: 2.00 |
| S-01013 ~~Emulation: Implement public CubeSet methods (see SIfteo API)~~ (Accepted) Ethan 4.00 | | | ~~Write tests for methods in CubeSet class~~ Ethan 0.00 / ~~Implement CubeSet class methods~~ Ethan 0.00 | Test Results: To Do: 0.00 |
| S-01017 ~~Emulation: Implement Sprite class~~ (Accepted) Kurtis 13.00 | | | ~~Write tests for SpriteData class~~ Kurtis 0.00 / ~~Implement SpriteData class~~ Kurtis 0.00 / ~~Write tests for displaying sprite images on cubes~~ Kurtis 0.00 / ~~Implement rendering sprite images to cubes~~ Kurtis 0.00 | Test Results: To Do: 0.00 |

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|---|---|---|---|---|
| | | | ~~Write tests for Sprite rotation and scaling~~<br>Kurtis 0.00 | |
| | | | ~~Implement Sprite rotation and scaling~~<br>Kurtis 0.00 | |
| | | | ~~Write tests for Sprite pivoting and paint masking~~<br>Kurtis 0.00 | |
| | | | ~~Implement pivoting and paint masking~~<br>Kurtis 0.00 | |
| S–01018<br>Emulation: Implement StateMachine class<br>In Progress<br>Alex 10.00 | Implement Locking<br>Alex 2.00 | Test Bucket<br>Alex 2.00<br><br>Implement Transitions<br>Alex 3.00 | ~~Implement StateMachine Class~~<br>Alex 0.00 | Test Results:<br><br>To Do: 7.00 |
| S–01019<br>~~Documentation: Milestone 3~~<br>Accepted<br>Alex, Kurtis, Ethan, Richard 6.00 | | | ~~Write Milestone~~<br>Alex, Kurtis, Ethan, Richard 0.00 | Test Results:<br><br>To Do: 0.00 |
| S–01020<br>Application: Test Cube Actions<br>Richard 8.00 | Brainstorm Application Ideas<br>Richard 2.00<br><br>Create Application Solution and Outline<br>Richard 2.00<br><br>Develop Application<br>Richard 2.00<br><br>Test Application<br>Richard 2.00 | | | Test Results:<br><br>To Do: 8.00 |

# Sprint 3 Backlog

| Backlog | (None) | In Progress |
|---------|--------|-------------|
| **S-01005** <br> UI: Cube drag-and-drop with displacement <br><br> Alex    8.00 | | Modify drag-and-drop behavior <br><br> Alex    7.00 |
| **S-01014** <br> Emulation: Implement Sound class <br><br> Kurtis    8.00 | Write Sound tests <br> Kurtis    2.00 <br><br> Write code for Sound class <br> Kurtis    6.00 | |
| **S-01015** <br> Emulation: Implement MathExt structs <br><br> Richard    4.00 | Write tests for MathExt class <br>    1.00 <br><br> Implement MathExt struct <br>    3.00 | |
| **S-01016** <br> Emulation: Implement Mathf class <br><br> Ethan    4.00 | Write tests for Mathf class <br> Ethan    1.00 <br><br> Write code for Mathf class <br> Ethan    3.00 | |
| **S-01021** <br> Documentation: Milestone 4 <br><br> Alex, Kurtis, Ethan, Richard    6.00 | Write Milestone <br> Alex, Kurtis, Ethan, Richard    6.00 | |
| **S-01022** <br> Prepare Project for Shipping <br><br> Alex    2.00 | Create Deployment Plan <br><br> Alex    2.00 | |