DPDS, Where Are They Now?

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Vision

To create the most

user-friendly UAS package delivery management and tracking system

for both clients and the general public (users).

Motivation

UAS delivery systems are being developed by multiple companies, and are expected to have an **immense impact on future shipping methods.**

Methods: Agile *****

Pros:

- Set timeline for project.
- Encouraged team participation.
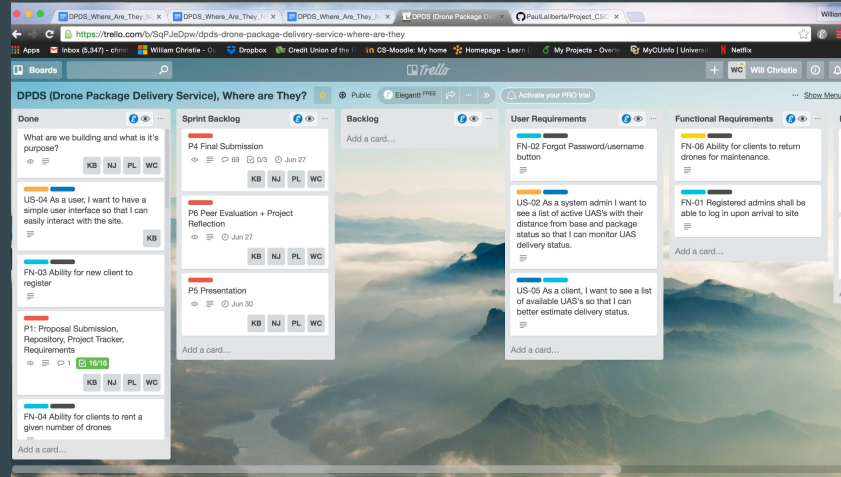- Iterative development and testing.

Cons:

- Limited time for actual sprint.
- Hard to implement with small team

Tools: Trello *****

Pros:

- Ease of Use
- Customizability
- Messaging Capabilities
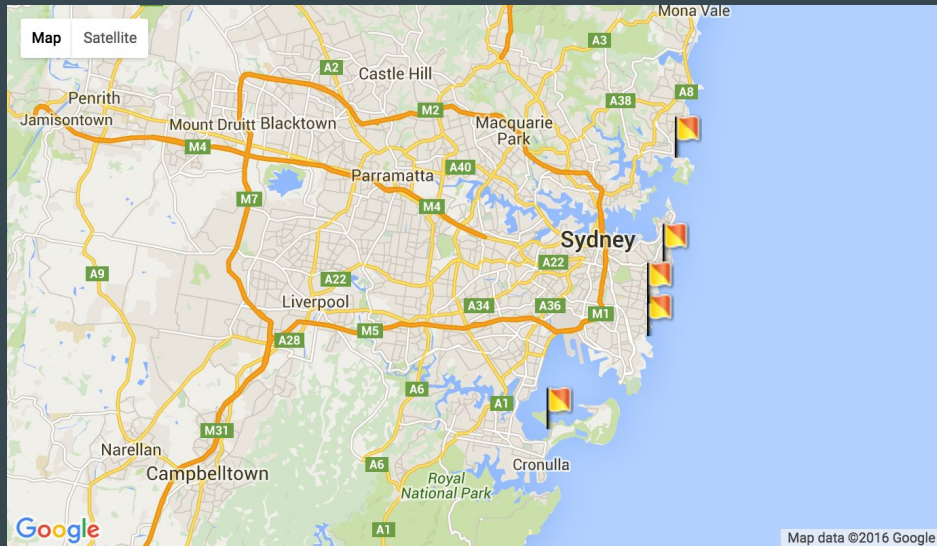- Checklists
- FREE

Cons:

- Limited number of label colors.

Tools: Google Maps API *****

Pros:

- Ease of Use
- Documentation
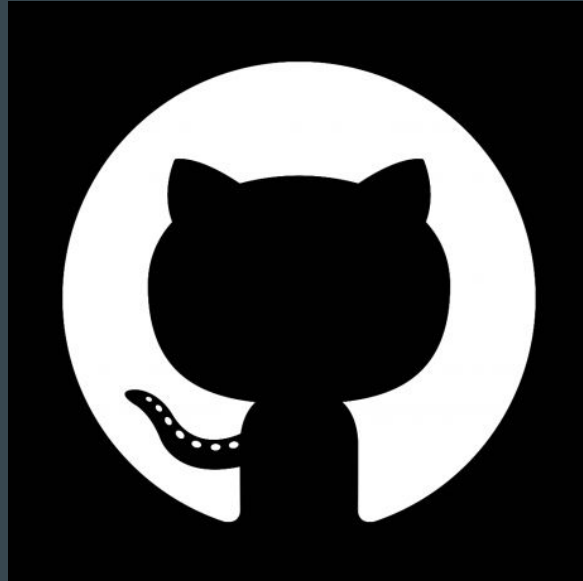- Customizable
- Android, IOS,
  Web Friendly
- FREE

Cons:

- Disorganized
  Documentation

Tools: vim *****

Pros:

- Simple and lightweight.


```
function initMap() {

    //set drone coordinates.
    var droneLatLng = ['Delivery Location', <?php
    echo $droneCoordinates[0]." ".$droneCoordinates[1];?>];

    //initialize map
    var map = new google.maps.Map(document.getElementById('map'), {
            zoom: 9,
            center: {lat: droneLatLng[1], lng: droneLatLng[2]}
    });

    // place  custom delivery marker
    var drone = {
    url:'https://cdn2.iconfinder.com/data/icons/modern-future-technology/128/drone-128.png',
    scaledSize: new google.maps.Size(25,25)
    };

    var marker = new google.maps.Marker({
            position: {lat: droneLatLng[1], lng: droneLatLng[2]},
            map: map,
            icon: drone,
            title: droneLatLng[0]
    });

    // info window for delivery marker
    var contentstr = '<div id = "content">' +
            '<div id="deliveryInfo">' +
            '</div>' +
            '<h1 id="firstHeading" class="firstHeading">Delivery Info</h1>' +
            '<p><b>Order ID: </b>' + '<?php echo $orderId?>' + '</p>' +
            '<b>Current Status: </b>' + '<?php
                    if ($droneStatus == 1) {
                            echo "Pending.";
                    } else if ($droneStatus == 2) {
                            echo "In transit.";
                    } else if ($droneStatus ==3) {
                            echo "Delivered.";
                    } else if ($droneStatus == 4) {
                            echo "Available.";
                    } else {
                            echo "Error: Unable to obtain status, check back later.";
                    }
            ?>' + '</p>' +
            '<b>Flight Speed:</b> 20 meters per second (45 miles per hour)</p>' +
            '<b>Delivery ETA: </b>' + '<?php
                    if ($time <=0) {
                            echo "delivery complete.";
                    } else if ($time < 1) {
                            $time = intval($time * 60);
                            echo "estimated $time minutes until arrival.";
                    } else
```

Cons:

- Difficult to cut/paste blocks of code.

Tools: FLASK **✱✱✱

Pros:

- Easy setup
- Nice Layout

Cons:

- Insert/remove queries

Tools: Codeception & Doxygen *****

Pros:

- Easily test website features
- Summary files

Cons:

- Testing can quickly become complicated
- Documenting code

```php
1  <?php
2      $I = new AcceptanceTester($scenario);
3      $I->wantTo('Place an order');
4      $I->amOnPage('/');
5      $I->fillField('user', 'WTC');
6      $I->fillField('pass', 'password');
7      $I->click('Login');
8      $I->submitForm('#drone', [
9      'verifyid' => 'WTC',
10     'verifypass' => 'password',
11     'drones' => '1']);
12 ?>
```

Culminating Project Features

- Login/Register

- Rent Drones

- Place Delivery Order

- View Table of All Orders

- View Delivery Statuses

- View Delivery Tracking Map.

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