

# Unity Optics

## Replease Plan

Team Unity

Release Date: 7/26/2019

Release Revision 2: 7/8/2019

University of California, Santa Cruz

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## 1 High Level Goals

Our project aims to implement a Unity Engine plugin providing 3D-based advertisement tools for monetization of video games. The high level goals include:

- Display advertisements on game objects
- Track players' interactions with advertisements
- Save information to a database
- Access data for web-based visualizations and analysis of the players' interaction

Furthermore, our release functionality is listed here in priority order, from highest (top) to lowest (bottom):

- Continuous Integration
- Website
- Prototype testing

## 2 User Stories for Release

Here we list the user stories that are necessary implemenations for the high level goals and assign them to appropriate sprint weeks. These are ordered in terms of priority of highest (top) to lowest (bottom).

### 2.1 Sprint 1

1. As a game developer I want to know when an advertisement is within a player's view so I know players can see the ad.
2. As a game developer I want to track how much time is spent watching an advertisement in-game so I know if player's are engaged by the ad.
3. As a game developer I want to track the distance to the advertisement and angle from the center of the player's view the ad is so I can imitate eye-tracking.
4. As a game developer I want to marshal this data into a file so I can retrieve it later.

### 2.2 Sprint 2

1. As a game developer I want to format and store my data in a database.
2. As a game developer I want a simple API to access data from my players' game sessions so I can derive useful information from the game.
3. As a game developer i want to display my game on a website with visualizations of the data so I can analyze what my players are doing.
4. As a game developer I want more advanced telemetry such as inter-actable objects to be tracked so I can see how my players react to advertisements.

### 2.3 Sprint 3

1. As a game developer I want to use the data to derive useful information so I can build better advertisements.

2. As a game developer I want to be able to compare the effectiveness multiple advertisements in-game so I choose which advertisements are best.

### 3 Product Backlog

In terms of high level goals and user stories that were discussed but not being considered for the final release, we decided that having the database dynamically display advertisements in the game and using Google Tensorflow to implement machine learning techniques to measure the success of the advertisements. Both of these felt out of the scope of the project namely due to the time available to us; however, both feel reachable given more time later down the time.

We wanted to focus on tracking the effectiveness of advertisement telemetry instead of the serving of advertisements. Hence, our database is only for collection and releasing data from players' interactions with advertisements. Also, having to learn Tensorflow was a technology that will be better served when we actually have interesting information available for it. Within the time span of this project, we felt that by the end we would have interesting information but not enough time to push it through a machine learning technology and visualize it.