Sprint 1 Plan | Trace.js
Completion date: 1/30/15 | Revision 0.0.1, 1/19/15

Goal

To build a website with functionality to view an orthographically traced sphere, click a “render” button, and view the resulting ray-traced image in the browser.

User Stories

As a user, I want to visit a web page and see an orthographic ray-traced sphere so that I know the ray tracer is working properly. (3)

- Use HTML5 canvas to map 3d coordinates to a 2d perspective

As a user, I want to see that the ray-traced sphere is an accurate representation with correct proportions, color, and size. (2)

- On user click, traced image appears where the visualized scene was before

As a developer, I want point and vector classes so that I can create mathematical representations of points, vectors, and normals in a 3D scene. (6)

- Build and test a Point3D class
- Build and test a Vector class
- Build and test a Normal class

As a developer, I want a RGBColor class so that I have a simple representation for an RGB color. (2)

- Build and test a RGBColor class

As a developer, I want geometric shape classes so that I have an interface for which all geometric shapes and a representation of Spheres in a 3D scene. (5)

- Build and test a GeometricObject base-class
- Build and test a Sphere class extending GeometricObject

As a developer, I want a Ray class so that I can programmatically trace rays. (3)

- Build and test a Ray class

As a developer, I want a simple geometric tracer classes so that I have an interface for all tracers in a scene and implement simple sphere tracing capability. (5)

- Build and test a Tracer base-class
- Build and test a SimpleSphere class extending Tracer

As a developer, I want a ShadeRec class so that I can record shading information in ray-object intersections easily. (5)

- Build and test a ShadeRec class

As a developer, I want a ViewPlane class so that I have a representation for the final ray traced image. (5)

- Build and test a ViewPlane class

As a developer, I want a World class so that I have a simple way to represent all the objects in a given scene. (3)

- Build and test a World class

Team Roles

Chris Camargo: Tracer developer, web developer
Steven Esser: Tracer developer
Shahar Zimmerman: Tracer developer, web developer
Katherine Barsaloux: Tracer developer
John Haytko: Tracer developer

Initial task assignment

Chris Camargo: Story - Point and vector classes

- Build and test a Point3D class

Steven Esser: Story - RGB color class

- Build and test a RGBColor class

Shahar Zimmerman: Story - Scene visualization in a web page

- Use HTML5 canvas to map 3d coordinates to 2d perspective

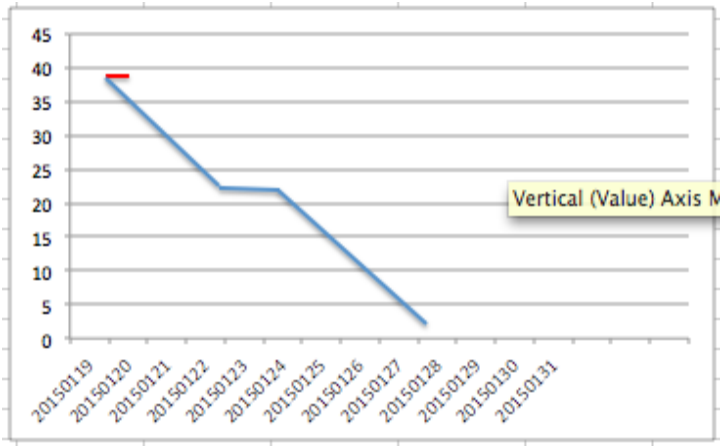
Katherine Barsaloux: Story - View plane class

- Build and test a ViewPlane class

John Haytko: Story - Geometric tracer classes

- Build and test a Tracer base-class

Initial burnup chart



Scrum times

Waiting on TA and professor availability.