

1. Brandon Kmiec, CSC 165 Section 01, A2 – Dolphin Tour 2
2. Screenshot of a typical scene



3. Dolphin controls
 - a. Keyboard
 - i. W – move forward
 - ii. S – move backward
 - iii. A – Yaw left
 - iv. D – Yaw right
 - v. 2 (number row) – Toggle dolphin wireframe
 - vi. O – Toggle xyz axis
 - b. Gamepad
 - i. Y-axis – Move forward/backward
 - ii. X-axis – Yaw left/right
 - iii. Button 2 – Toggle dolphin wireframe
 - iv. Button 0 – Toggle xyz axis
4. Orbit camera and overhead viewport camera controls
 - a. Orbit camera
 - i. Keyboard
 1. I – Increase elevation
 2. K – Decrease elevation
 3. J – Move left around the dolphin
 4. L – Move right around the dolphin
 5. RBRACKET (},]) – Zoom out
 6. LBRACKET ({,[) – Zoom in
 - ii. Gamepad
 1. RY-axis – Increase/decrease elevation

2. RX-axis – Move left/right around the dolphin
 3. Z-axis – Zoom in/out
- b. Overhead viewport camera
 - i. Keyboard
 1. T – Move forward
 2. G – Move backward
 3. F – Move left
 4. H – Move right
 5. V – Zoom in
 6. B – Zoom out
 - ii. Gamepad
 1. POV (Point of View Hat) – Move forward/backward/left/right
 2. Button 4 – Zoom in
 3. Button 5 – Zoom out
5. The node controllers I used are RotationController provided in tage and TranslateController which was written by me. The rotation controller is applied to an object and allows the object to be rotated on any axis. The rotation controller is applied to the octBin manual object and starts rotating once the game starts. The translate controller is applied to an object and allows the object to be translated within a range on any axis. The translate controller is applied to the four visit locations. Once a location is visited, it will start moving on either the x, y, or z axis.
 - a. Before I realized there was a rotation controller included, I created something similar called SpinController. I decided to leave it included in tage because it is a different implementation of the rotation controller.
 - b. I also added the StretchController from canvas but did not use it.
6. My scenegraph parent/child relationship appears with the octBin manual object and the four location postcards. The octBin is the parent and the postcards are the children. Rotation and translation are propagated down to the children. When a postcard appears, it starts spinning along with the octBin. I initially wanted to have the postcards orbit the octBin but was unable to get it working.
7. Changes to the TAGE engine
 - a. Added a CameraOrbitController
 - b. Added TranslateController, StretchController, SpinController
8. Requirements I was not able to get working
 - a. I was unable to fully implement the scenegraph parent/child relationships how I would have liked to.
9. Additions beyond the specified requirements
 - a. Added RvpMoveAction class to manage the movements for the right viewport camera
10. Assets used in the game
 - a. Rippled sand texture



- i.
- ii. Not made by me
- iii. Obtained from <https://freestocktextures.com/texture/rippled-sand-surface,874.html>
- iv. Creative Commons Zero License: <https://freestocktextures.com/license/>, <https://freestocktextures.com/support/>

b. Blackboard texture



- i.
- ii. Not made by me
- iii. Obtained from <https://freestocktextures.com/texture/old-green-school-blackboard,1654.html>
- iv. Creative Commons Zero License: <https://freestocktextures.com/license/>, <https://freestocktextures.com/support/>

c. Blackboard postcard texture



- i.
- ii. Created by me using the windows Snip & Sketch tool to obtain a screenshot in the game
- iii. Blackboard texture, <https://freestocktextures.com/texture/old-green-school-blackboard,1654.html>, is used in this texture. The license can be found here <https://freestocktextures.com/license/>, and mentions modifying is allowed.
- iv. Dolphin texture was copied from the distributed TAGE example 01a-HelloDolphin

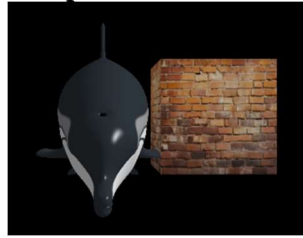
d. Brick Wall texture



- i.
- ii. Not made by me
- iii. Obtained from <https://freestocktextures.com/texture/texture-of-a-background-made-of-aged-bricks,1641.html>

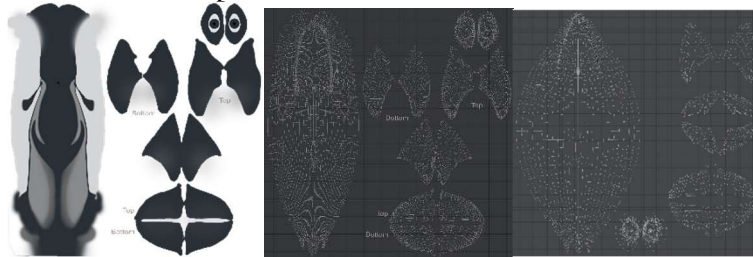
- iv. Creative Commons Zero License: <https://freestocktextures.com/license/>,
<https://freestocktextures.com/support/>

e. Brick Cube postcard texture



- i.
- ii. Created by me using the windows Snip & Sketch tool to obtain a screenshot in the game
- iii. Brick Wall texture, <https://freestocktextures.com/texture/texture-of-a-background-made-of-aged-bricks,1641.html>, is used in this texture. The license can be found here <https://freestocktextures.com/license/>, and mentions modifying is allowed.
- iv. Dolphin texture was copied from the distributed TAGE example 01a-HelloDolphin

f. Dolphin texture and dolphin wireframe texture



- i.
- ii. Not made by me
- iii. This texture was copied from the distributed TAGE example 01a-HelloDolphin

g. Custom texture 1



- i.
- ii. Created by me using Microsoft paint

h. Custom torus postcard texture



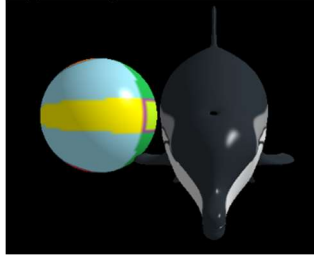
- i.
- ii. Created by me using the windows Snip & Sketch tool to obtain a screenshot in the game
- iii. Dolphin texture was copied from the distributed TAGE example 01a-HelloDolphin

i. Custom texture 2



- i.
- ii. Created by me using Microsoft paint

j. Custom sphere postcard texture



- i.
- ii. Created by me using the windows Snip & Sketch tool to obtain a screenshot in the game
- iii. Dolphin texture was copied from the distributed TAGE example 01a-HelloDolphin

k. Silver texture



- i.
- ii. Created by me using Microsoft paint

l. Sun texture



- i.
- ii. Created by me using Microsoft paint

11. Tested on RVR-5029 RAYMAN