

Possible Update Documentation

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Generalization Updates

1. Roamer.cs

1.1. Roaming(GameObject Obj)

- 1.1.1. Make it so roaming will account for more collisions than just the cell membrane. (Use the collider type to define the movement or path)

1.2. MoveToDock(GameObject Obj, GameObject dock)

- 1.2.1. Generalize pathing around objects so that it accounts for more than the inner cell wall. (Use the collider type to define the movement or path)

2. GTP_CmdCtrl.cs

2.1. Fixed update()

- 2.1.1. use the pathfinding algorithm in the roamer class.

3. Spawner.cs

3.1. ThisIsARotatableObject()

- 3.1.1. Generalize this function so that snaps can occur to other objects than cell wall and nucleus wall. (You could do this by checking what the object is colliding with.)
- 3.1.2. Attach a GameObject Reference to each snapped object so that any movements along that object can be generalized. (The solution above makes this change easier.)
- 3.1.3. Generalize snap and rotate (View each object's collision as a collection of nodes and not as a whole object and this becomes much easier.) (For Rotation getting a line perpendicular to the tangent of the location will solve this issue)
- 3.1.4. Once you finish this Generalize object traversal on an object.(Will not be in spawner)
- 3.1.5. After that Remove lines:117, 120-124, 136, 27,163,171,178 in Spawner.cs to re allow dropping snappable objects anywhere. (Per Client Requests)

4. UIControl.cs

4.1. Updating the screen resolution behind the scene

- 4.1.1. Look at how to ask for the specs on a monitor from the hardware through the OS and use that to create a generalized beginning resolution.
- 4.1.2. Use Unity Documentation with Screen.SetResolution class for width height and screen modes preferred.
- 4.1.3. With RectTransform you can change the location of the anchors so that the camera adequately has a view of the game area (Use the size of the png in hardware to determine the size of the play area... Use the prefab size of the background.)
- 4.1.4. With use of the Display class, the user is able to tell the resolution of the particular displays with systemHeight, systemWidth and rendering as well

with `renderingHeight` and `renderingWidth`. `SetParams` and `SetRenderingResolution` are also there for rendering the sizes and positions of users' displays.

Efficiency Updates

1. Roamer.cs
 - 1.1. Roaming(GameObject Obj)
 - 1.1.1. Find a way to get the center without brute force.
2. ATPPathfinding.cs
 - 2.1. FixedUpdate()
 - 2.1.1. Needs to drop off of a target after a certain amount of time
 - 2.1.2. MAKE SURE that the target is reallocated to be targeted by other ATP after the time limit is up.
3. PKABMovement.cs/ PKAMovement.cs
 - 3.1. Kinase movement bug
 - 3.1.1. Not sure how to solve the kinase bugging around a cell wall
 - 3.1.2. May have something to do with the bug that allows infinite backwards momentum.
 - 3.1.2.1. Link to a glitch that is basically the same as an example
[Alberto's Beginner Manual Superswim Tutorial!](#)

Readability updates

1. GTP_CmdCtrl.cs
 - 1.1. FixedUpdate()
 - 1.1.1. This needs to be fully rewritten; it is too many if statements and needs to be broken into parts.