

Quadropus Game - Fundamental Design (Target 1)

A puzzle-platformer where the player must balance the use of four tentacles to solve a variety of environmental puzzles

Controls

'a'/'s'/'d'/'w' keys control character movement. 'a' and 'd' control horizontal drift and movement on the ground. 'w' controls upward movement in water and on walls. 's' controls downwards motion on walls. The character always moves in water with its head toward the top of the screen and tentacles to the bottom. When climbing a wall, the head point normal to the wall, though controls remain in global space. ('a' always moves to the user's left)

Legs are controlled by a context-sensitive click mechanic. Clicking on an item or environmental element will cause an interaction, if the character is close enough. Interactions are picking up an object, dropping an object, attaching to a wall, and detaching from a wall. Wall attachment will require 2 tentacles, swimming (vertical) will require 4. (To be rebalanced in testing)

Swimming upward can be performed three times, in three separate bursts. After these three are used, the character must attach to a wall or land on a platform before the player can jump again. Over time, a weak gravitational force pulls the character toward the bottom of the screen.

Puzzle Elements

Weight - the character and the objects must have weight. This will interact with currents and gravity.

Walls - two types of walls exist in the game: climbable and unclimbable. The walls must be differentiated visually. The character cannot pass through any walls.

Currents - simple currents that can carry the character and/or objects. At this stage, currents exist without sources. Can be linear or circular. Two different strengths exist - normal current, and strong current (moves faster, can move heavier things). Must be differentiated visually.

Switches - simple toggle switches that can start and stop currents. Must alter visual properties of current tiles and the switch. Toggled by simple click when nearby.

Rocks - the only object at this stage. Can be picked up using 2 tentacles. Can be dropped. Adds to character weight (minimize effect of currents)

Visual Style and Character Animation

At this stage, a basic environment tile set should be in place for any puzzle elements described above. Any visual feedback can be instantaneous color changes. Currents should somehow indicate the direction of motion - static arrows would suffice. The quadropus should have at least two poses - climbing

and swimming/floating. These can be static images. When selecting or using an object, tentacles will not move. The character will “magically” summon items to a tentacle position.

Levels

The basic levels should test all the puzzle elements described above both individually and in combination. A simple marker tile will work to mark the goal of each level. A rough level order is as follows:

- ◆ Swimming Up
- ◆ Wall Climbing
- ◆ Wall Climbing and Swimming (with unclimbable walls)
- ◆ Simple current
- ◆ Multiple currents
- ◆ Current with switch
- ◆ Current with rock (add weight to pass current)

Technical Details

The game should be able to load at any level and quit or restart during or after any level. Quit and Restart should be implemented through a pause function. There should be some non-menu transition between levels (a black screen will work).

We should have tools to generate tile maps from vector images and then to generate level frameworks from bitmaps.

Obviously, any function described in previous sections should work.