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Xeno Affordance Design
CS 485

The Tool – A PlayStation 4 DualShock Remote controller



Specs/Functions-

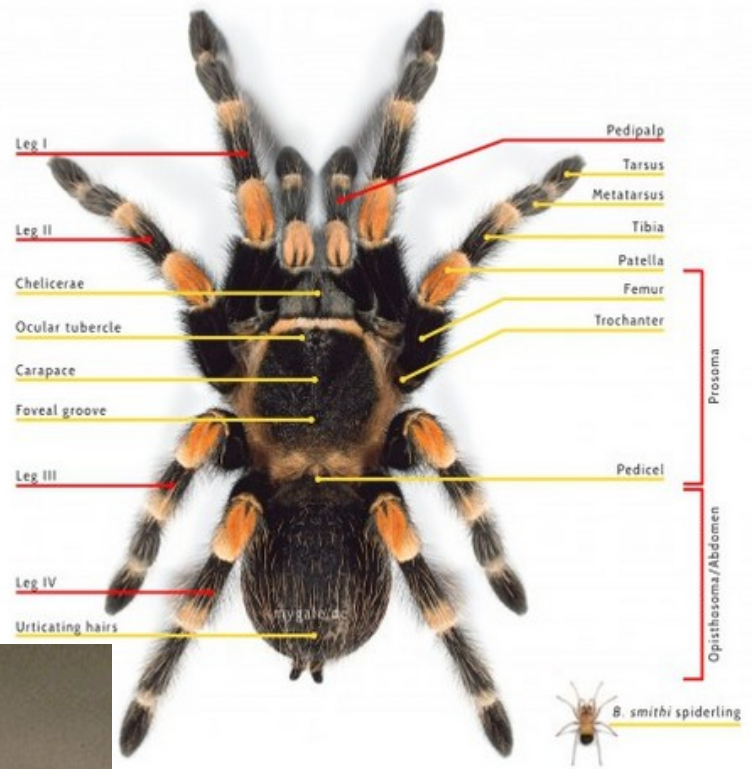
- Traditional Joystick/analog layout for game play and other applications on the PS4 platform designed for human hands:
 - Two handles to grip your palms around
 - Two joysticks mapped to the mid left and right of the front of the remote, mapped conveniently for your thumbs to function.
 - Analogs mapped to the upper left of the left Joystick, and upper right of the right joysticks mapped for your thumbs to switch upward and perform an action (along with the options and capture buttons)
 - bumpers and triggers on the back side of the remote for pointer finger or middle finger to perform actions
 - Middle button with PS4 logo signifies that it will power on the system, and go to the main menu
 - Swipe pad mainly used for typing, and used as a button to pull up maps on most games

The Animal – A Giant Tarantula

A Giant tarantula with human thought process that likes to play games on the PlayStation 4.

- Based on simple observations, a tarantula generally uses all 8 of its legs to move from point A to Point B
- It's pedipalps (the two smaller looking legs in the front of it's body) are commonly used to dig, pick things up, and as a defense mechanism (along with it's front four legs) while the back four legs are used as support to the ground at all times, with the mid-front two legs (labeled leg2 in the picture) are commonly used as support too.

Based on these facts, the front 2 legs, and the pedipalps would most likely be the limbs used to perform most task besides moving



New Tool - Modified PS4 DualShock Controller made for Giant Tarantula Users

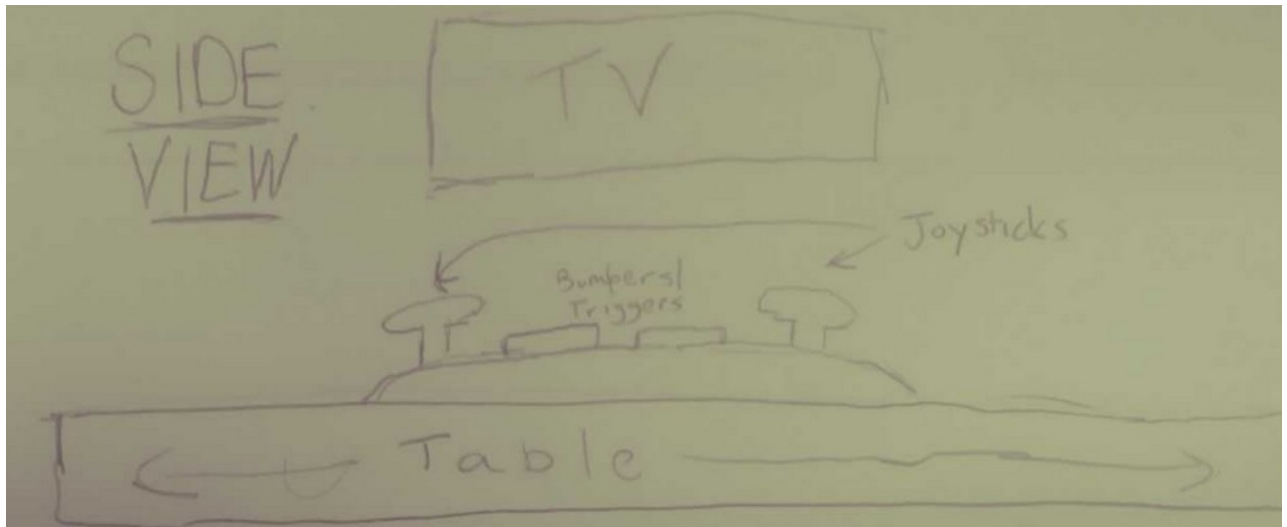
Specs/Functions

- A flattened design so that the Controller can rest on a flat table such as a coffee table, and the tarantula won't have to physically hold the remote, rather rest and hover over it, similar to our hands and a keyboard.
- Two joysticks towards the bottom left and right corners for the tarantula to operate with the lower front legs (leg2 in the diagram)
- the analog buttons right above the joysticks, shifted inward the slightest bit so that the tarantula's front two legs can control the analog options

- the PS4 logo in the middle along with the triggers and bumpers, so that they can be controlled by the pedipalps of the spider

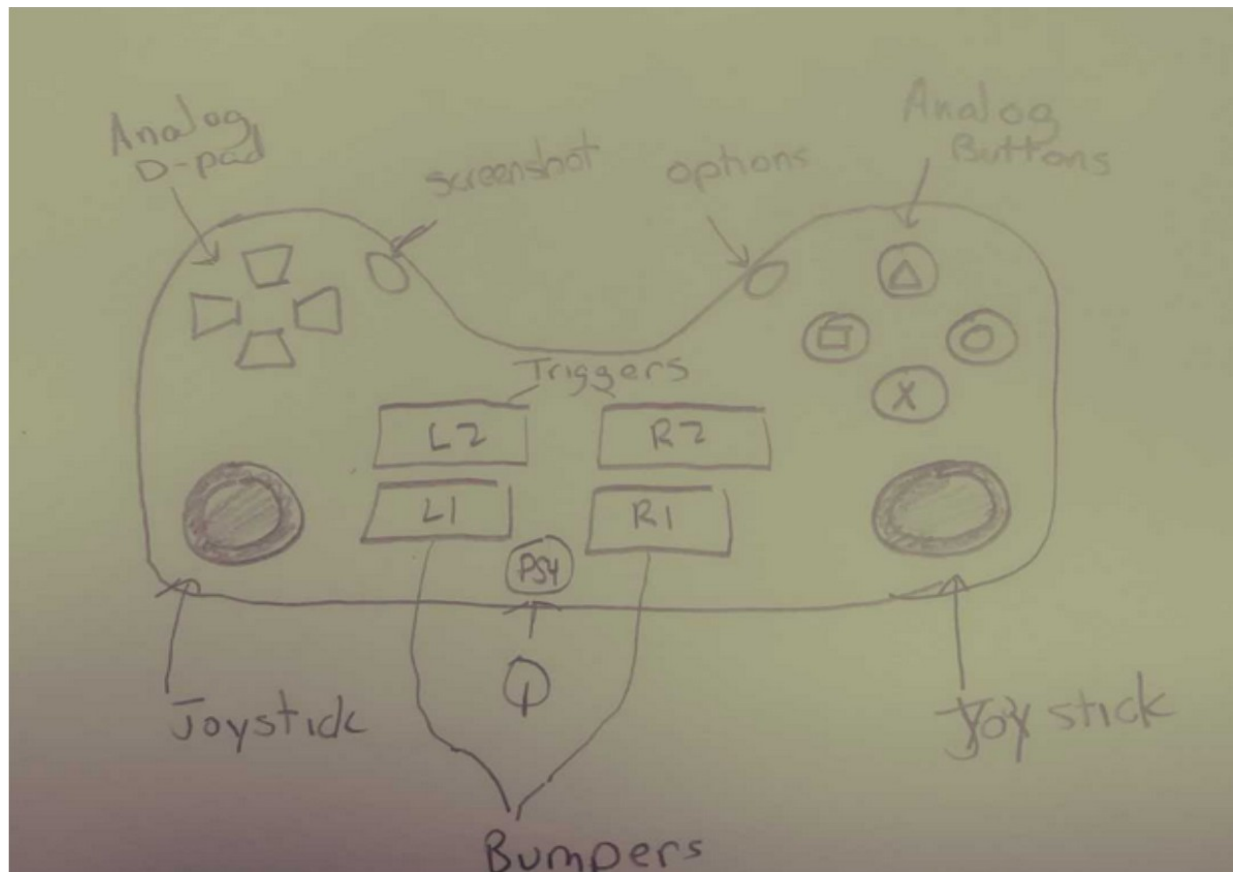
Image Of New Tool-

Side view facing TV

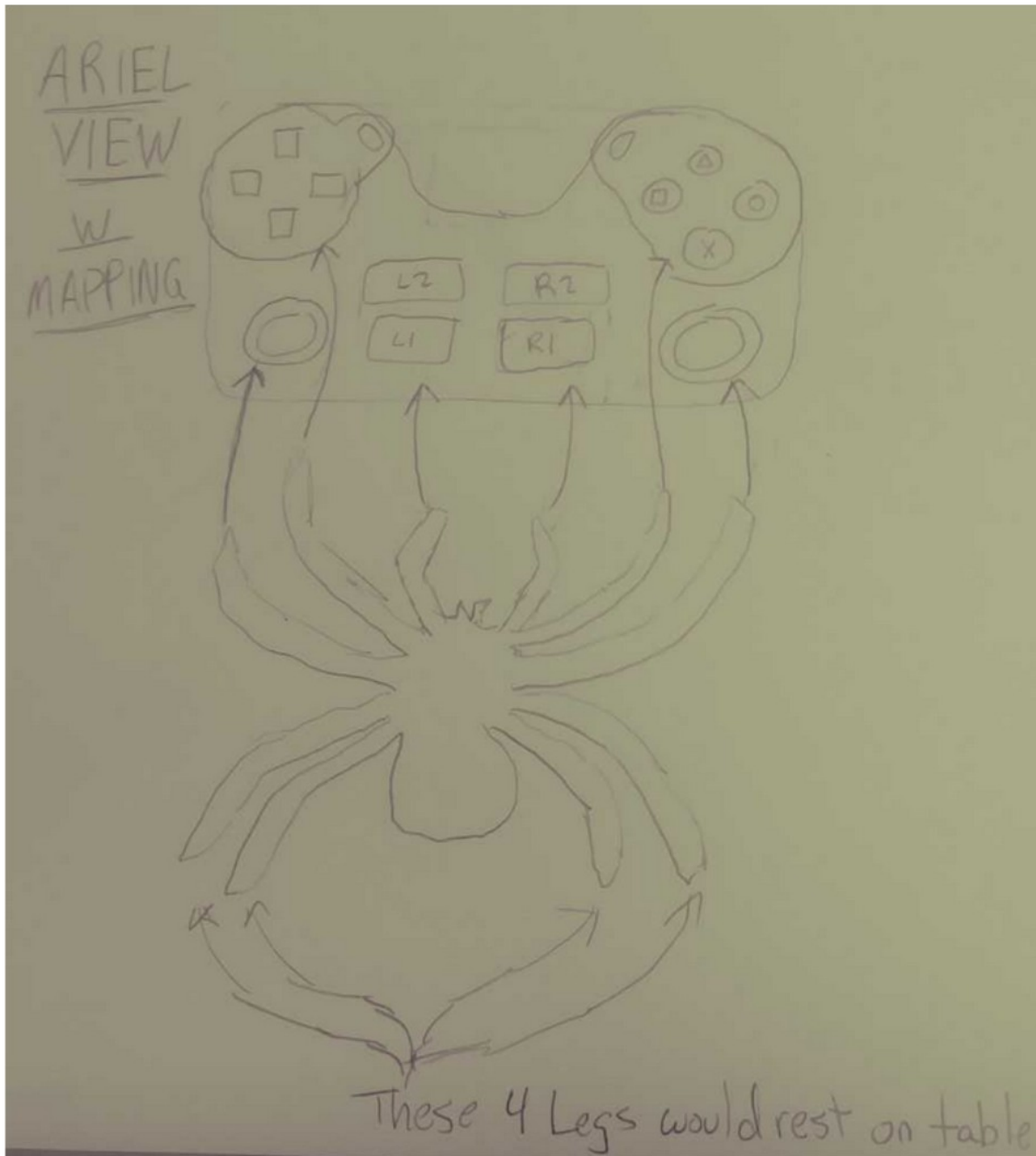


Note that the controller is resting flat on the table like a keyboard or mouse

Ariel View



Ariel View With Mappings To Spider



Discussion-

- One Key Difference Between the original PS4 DualShock controller and the Tarantula friendly PS4 remote is the fact that one rest on a flat object, like a keyboard, while the other is handheld. This is due to the fact that humans are anthropomorphic, in other words they lack hands with fingers that can grasp and contour the remote, while a spider doesn't. Having a remote that rest on a flat surface such as a keyboard eliminated this problem.

- Another key difference between the standard PS4 remote and Tarantula friendly remote is the movement of the bumper and trigger buttons from the side of the remote to the front of the remote. This is also due to the tarantula not being anthropomorphic so they cant grasp the remote and reach the back buttons. The current placement of the triggers and bumpers of the remote is based on the fact that the pedipalps of the tarantula are the most common used limb, just like our pointer finger, so I mapped it to the same buttons my pointer fingers would normally control during game play
- the spreading of the joysticks was a design decision based on the fact that the spiders legs are set up so they can spread further than a humans fingers, so more of their legs would be able to operate a wider range of buttons. In other words, humans often only use their thumb and one of their fingers on each hand to operate the remote, because their other fingers are used to grasp the remote. Since the new remote will not have to be grasped, the spider can afford to use more of its limbs operating the buttons.