System Gesture Demo

PlayStation®Vita Programmer Tool Runtime Library Release 3.50

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Table of Contents

1 Overview

The libsystemgesture demo is a sample program that uses libsystemgesture and operates butterfly-shaped objects displayed on the screen (Figure 1). An interaction operation can be performed by using both touch screen and rear touch pad with the gesture function the libsystemgesture supports. colladaRenderUtil is used to read and draw the butterfly-shaped objects.

Figure 1 Screen Shot of libsystemgesture Demo

Program Location

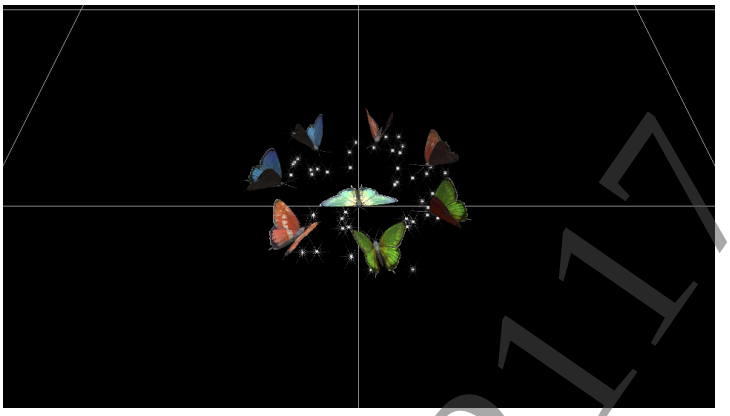
The libsystemgesture demo files are provided in the following directory.

samples/sample_code/input_output_devices/demo_systemgesture/

2 Assignment of Touch Gesture

Following the run of the libsystemgesture demo, some butterflies are displayed on the screen. Basically, these butterflies move together in groups staying close to their leader, the yellow green butterfly in the center of the Figure 2.

Figure 2 Behavior of Butterflies Moving Together in Groups

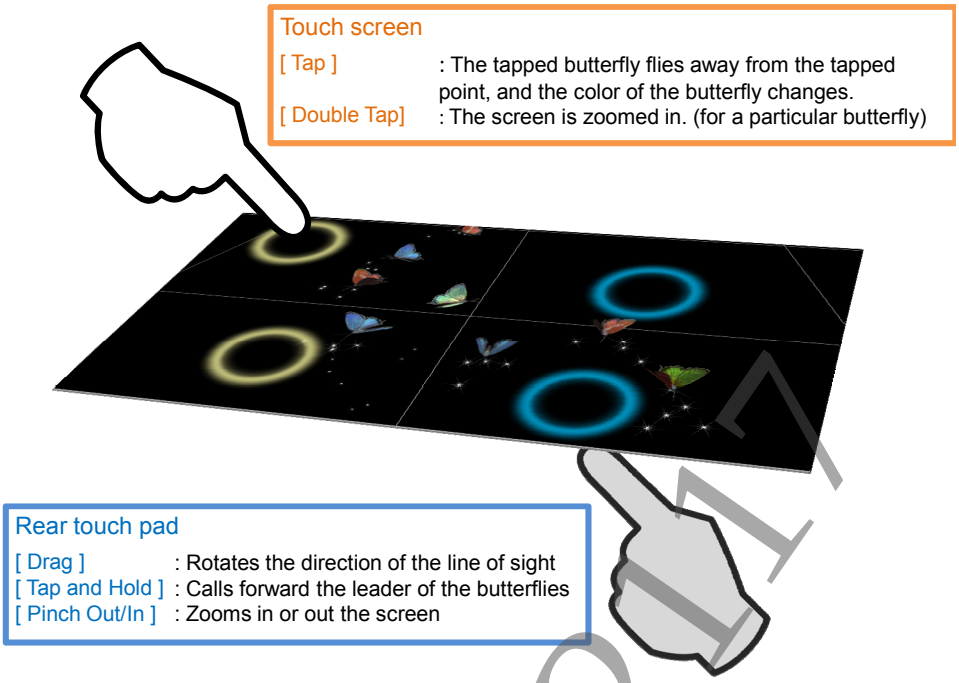


PlayStation®Vita provides two touch panels: the touch screen and the rear touch pad. Each panel has advantage and disadvantage and needs to be used according to the intended purpose. The touch screen is suitable for pointing at a particular position, but, at the same time, the screen is covered by a finger. On the other hand, the rear touch pad is not adequate to the operation to point at a certain position with a visual check, but users can operate the panel without covering the screen. Based on these features of both panels, touch gestures are assigned to each panel in accordance with the following policies.

- The touch screen is used when a particular position needs to be specified.
- The rear touch pad is used for the settings for entire screen such as line-of-sight and enlargement ratio, and for the operation in which the only relative changes of the touch position are used for the control.

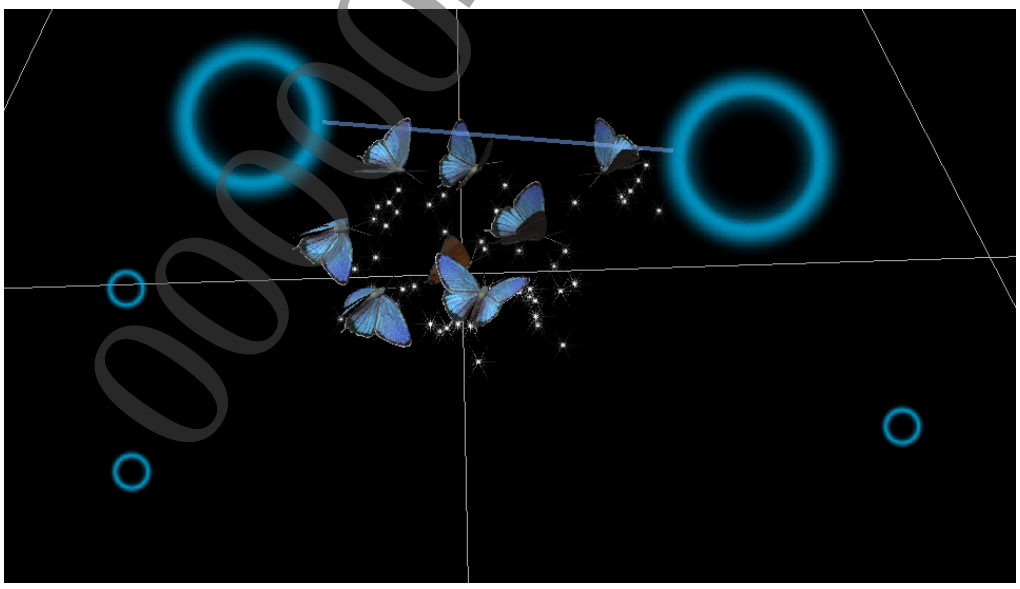
In the libsystemgesture demo, the four types of touch gestures, Tap, Drag, Tap and Hold, Pinch Out/In, are assigned as shown in the Figure 3.

Figure 3 Assignment of Touch Gestures in libsystemgesture Demo



Depending on the way to hold the body, fingers may touch the rear touch pad unintendedly. Particularly, fingers could touch either right or left side of the rear touch pad in many cases. To address this issue, in the libsystemgesture demo, if fingers touch either right or left side of the rear touch pad, a small blue circle appears in the screen. This circle has a smaller diameter than the usual circle, which appears when a proper touch panel operation is performed, and these touches indicated by the small blue circles are not used for usual operation of the objects. (Figure 4)

Figure 4 Changes in the Screen When Right and Left Sides of Rear Touch Pad Are Touched



Tap and Double-Tap are available for the touch screen operation, and each touch gesture has an effect as shown below (Figure 5).

- Tap : When a butterfly being tapped, the color of the tapped butterfly changes, and the butterfly moves like it flies away from the tapped point.
- Double-Tap : When a particular butterfly is hit, the screen is zoomed in around the butterfly.

Drag, Tap and Hold, and Pinch Out/In are available for the rear touch pad operation, and each touch gesture has an effect as shown below.

- Drag : The screen rotates in the direction of the line-of-sight.
- Pinch Out/In : The screen is zoomed in or out.
- Tap and Hold : The leader of the butterflies starts to move in the direction where the screen was pressed.
  At the same time, other butterflies move together in a way to form a group.

The assignment of the above described touch gestures can be freely changed by altering the libsystemgesture demo.

Figure 5 Touch Gestures of libsystemgesture Demo and Changes in the Screen