Avatar Team / Pages

Flow App

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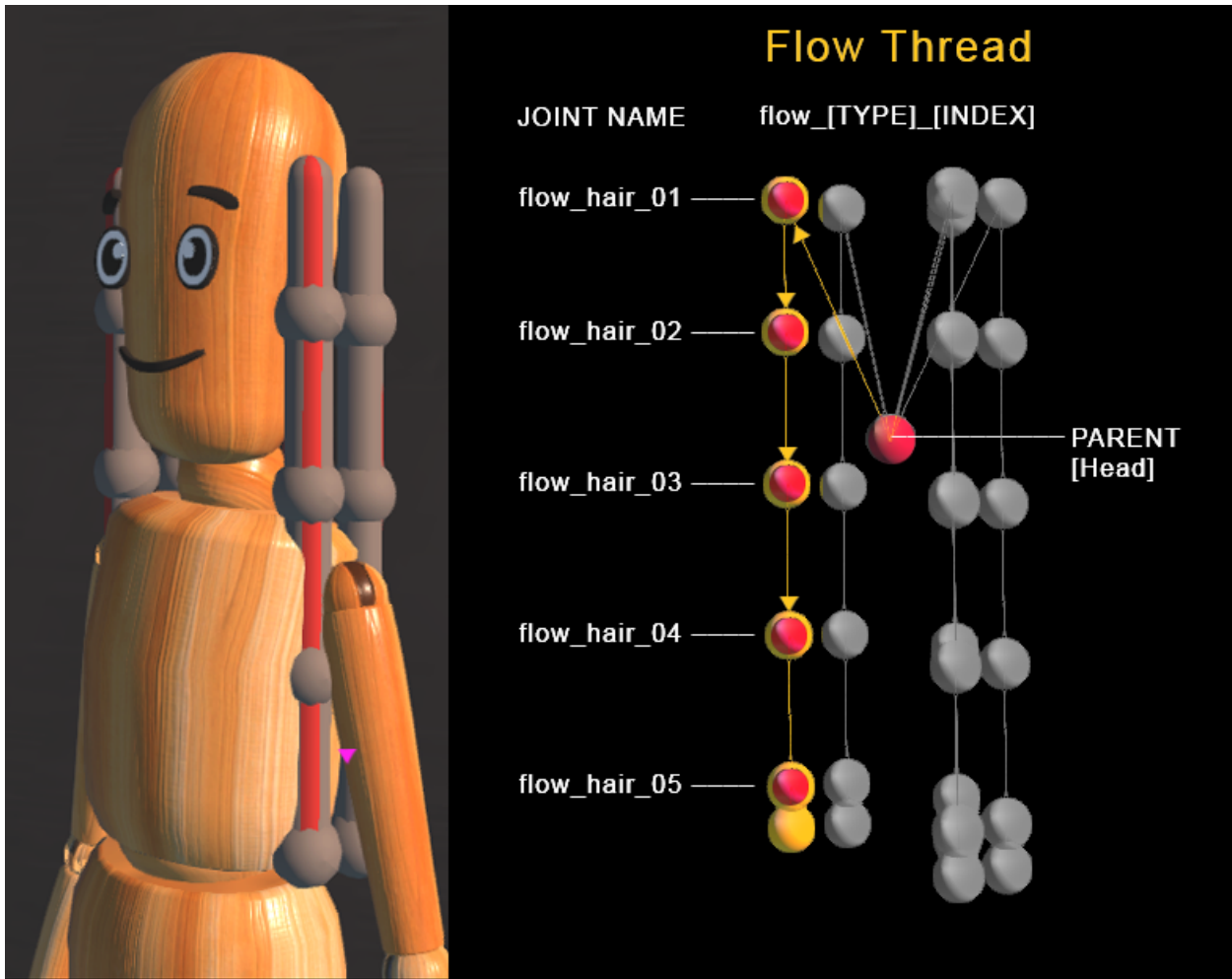Last modified Mar 30, 2018

Overview

Flow is a script that simulates physics on avatar's hair, clothes, and body parts. https://hifi-content.s3.amazonaws.com/luis/flowFiles/flow.js

Flow App is an interface application for visually debugging and configuring **Flow**. https://hifi-content.s3.amazonaws.com/luis/flowFiles/flowApp.js

Flow will only animate avatars that contain **Flow Threads**.

A **Flow Thread** is a set with as least 2 connected joints that comply with the following rules:

- The first joint is connected to an existing avatar joint ("Hips" for example).
- Every "Flow Joint" should be named **flow_[TYPE]_[INDEX]**, where **TYPE** defines a group of joints that share a common physics setup and **INDEX** is an integer. For example, if the thread is used to simulate a skirt, all the "skirt" joints should be named flow_skirt_01, flow_skirt_02, etc.
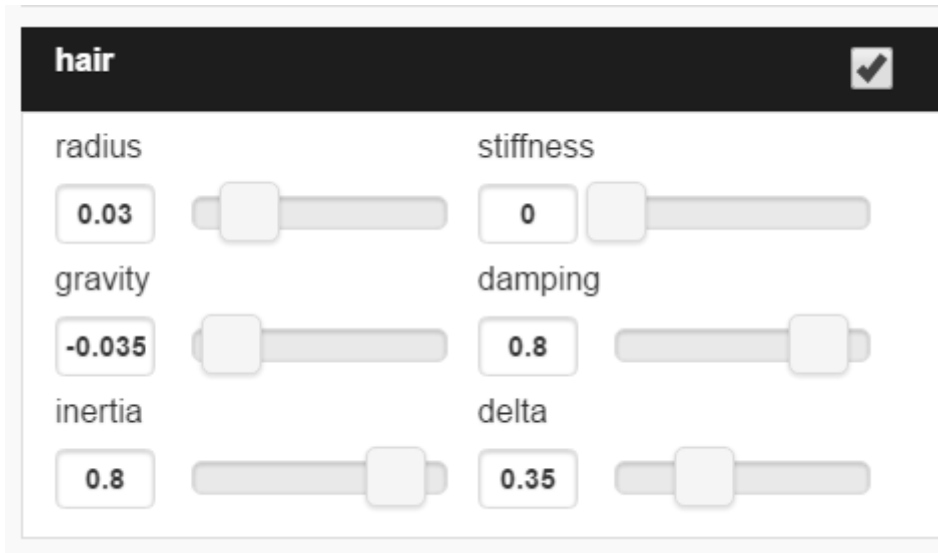
Display Panel

avatar: Displays/Hides the avatar mesh.

collisions: Activates/Deactivates collisions.

debug: Displays/Hides the debug shapes.

solid: Solid/Wireframe display for debug shapes.

Joints Panel

radius: Segments and knots thickness (collisions).

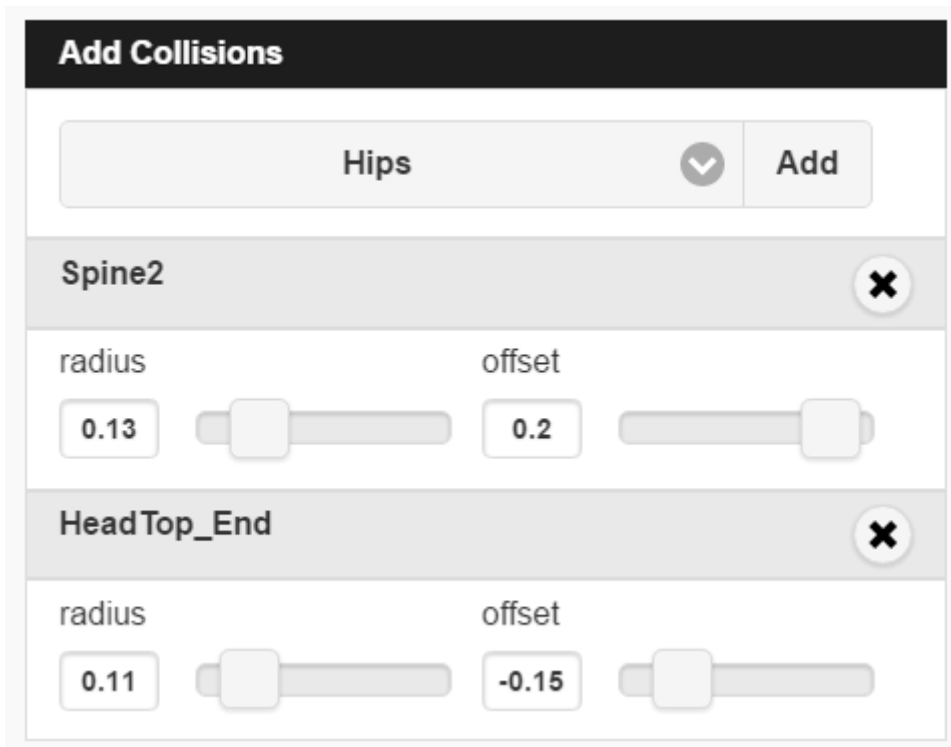**gravity**: Y-value of the gravity vector.

stiffness: Amount of stiffness for every thread.

damping: Amount of joint oscillation.

inertia: Rotational inertia multiplier.

delta: Delta time for every integration step.

Collisions Panel
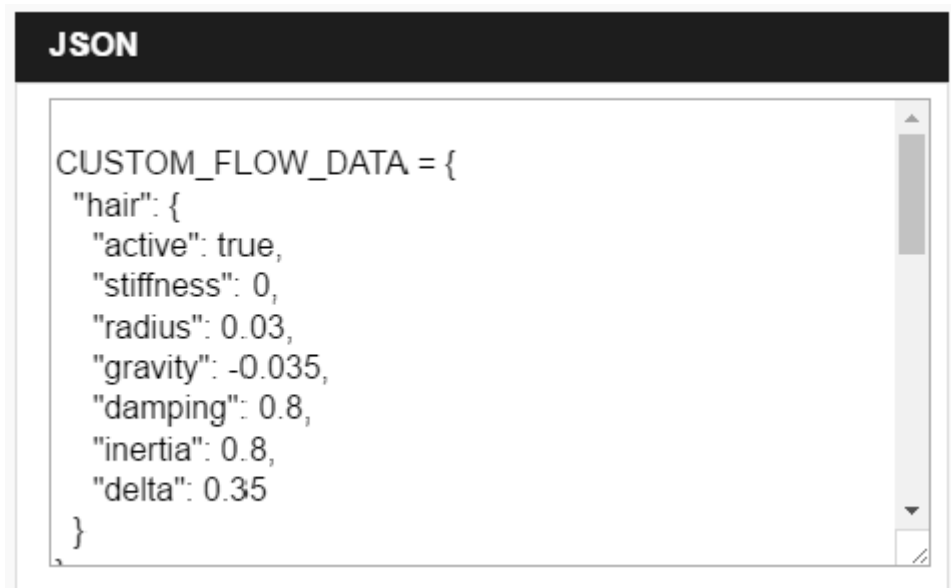
This panel manages collision spheres.

Every collision sphere is positioned using an existing avatar joint and offset.

radius: Collision sphere radius.

offset: Y-value of the offset vector along the joint.

The maximum amount of collisions is defined by the global COLLISION_SHAPES_LIMIT = 4.

JSON Panel

This panel displays the output data structure with the final configuration for the current setup.

This data can be copied and pasted on the **FLOW** script between the lines:

```
75
76    // CUSTOM DATA STARTS HERE
77
78    Erase existing code and paste new code here
79
```

```
    // CUSTOM DATA ENDS HERE
```

The modified **FLOW** script will be able to run independently loading the new configuration.

Avatars

This is a list of avatars rigged appropriately to use with **FLOW:**

**https://hifi-
content.s3.amazonaws.com/jimi/avatar/Mannequin/hairTest/mannequinHairTest8.fst**

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