Shot – by – Shot

Man Muscle Simulation

0:03 – 0:06 Muscle Simulation. Model from Mixamo's FUSE.

0:06 – 0:14 Calf and thigh up close. Muscles, wire frame, and normal mesh.

0:14 – 0:22 Arm and upper back up close. Muscles, wire frame, and normal mesh.

Cow Quadruped Rig

0:22 – 0:24 Cow turnaround. Model from Animium.

0:24 – 0:29 Controller setup. FK tail controls. Individual controllers for back, mid, and upper back. Front and back legs are both IK and FK.

0:29 – 0:38 Demonstration of the jiggle simulation on mesh. Both wire frame and mesh.

Forearm Skinning Script

0:38 – 0:58 Demonstration of Maya script. The script was written to fix a problem with rigged characters produced by the online platform, Mixamo. Mixamo allows you to upload, rig, and animate your character in minutes with very little user input. The rig produced, however, does not include a forearm joint which makes animating the wrist difficult. The script creates a joint and reskins the forearm area without affecting any of the other skinning values and without any user input.

Model by Ray Hassan. Script written by myself, Mary Spalla, and Adam Hargett.

Clarence Biped Rig

0:58 – 1:00 Clarence turnaround. Modelled by Dara Hamidi. Textured by Elizabeth Woods.

1:00 – 1:04 Controllers shown. IK leg with RP place locator at knee. Foot controller has driven keys for foot roll. Translation and rotation of both feet and legs are unconstrained.

1:04 – 1:09 IKFK arm. Forearm joint movement.

1:09 – 1:15 Mostly joint based face controller. Some controllers off to the side are controlled by blend shapes (smile, frown, cheek puff, brow furrow, blink). Allows animator to move face with limited movement off to the side or with infinite movement on face. Off the face controllers and on face controllers work well together. Can hide controllers on face for better visibility.

1:15 – 1:18 Joint based robe rig. Robe follows body movement to an extent. Additional controllers were added around arms, chest, knees, and upper back for better positioning around body. Not ideal setup for robe movements, but was what group decided on doing for project.

1:18 – 1:22 Animation of throwing a ball. Shown in both wire frame and normal mesh.

1:22 – 1:25 Facial transition between happy and sad. Also shows eye movement where the eyelids follows the direction of the eyes.

1:25 – 1:34 Clips from the short animation that this rig was used in.

Borgabal Biped Rig with Tail

1:34– 1:36 Borgabal turnaround. Modelled by Dara Hamidi. Textures by Elizabeth Woods.

1:36 – 1:39 IK tail with RP locator. The leg has no knee because character leg movements were intended to be similar to a penguins "waddle." Foot controller has driven keys for foot roll. Translation and rotation of both feet and legs are unconstrained. For the pelvis area, addition floating joints were added to maintain volume of stomach.

1:39 – 1:45 Mostly joint based face controller. Some controllers off to the side are controlled by blend shapes (smile, frown, cheek puff, brow furrow, blink). Allows animator to move face with limited movement off to the side or with infinite movement on face. Off the face controllers and on face controllers work well together. Can hide controllers on face for better visibility.

1:45 – 1:49 Character set in yoga pose.

1:49 – 1:51 Facial transition between angry and shocked.

1:51 – 1:57 Clips from the short animation that this rig was used in.

Rig and Controller Script (Not Shown)

Rig and Controller Script. GUI has three buttons: Left Side Joint Setup, Mirror Joints Add Controllers, and Clean Up. The first allows the user to place joints according to their model. The second allows the user to modify the controllers on the rig. The final button hides and locks attributes not used in each controller. NOTE: The script has a few bugs that I am in the process of fixing.

The arms and legs are IKFK. IK arms can follow head or hips. IK legs can follow hips. Keys already set up for hand and foot movements.