8.0 Animation Sequences

This demo shows how to create a set of animations, for example a Walk animation for Legs combined with a Wave animation for Arms. They will be created as separate sequences in order to be stored separately for import into a game engine as independently-invokable animations.

Open and Initialize the Model

1. Open a fully-rigged Blender model. This demo presumes you have a model with arms (for which we’ll create a WAVE sequence) and legs (for which we’ll create a WALK sequence).
2. Open two new windows (in addition to the 3D View): a Timeline window and a Dope Sheet window.

Create Animation Sequence #1 (e.g. “Legs_Walk”)

1. go into POSE Mode
2. Pose just the bones which will participate in the sequence. For example, pose the LEG bones (only) in their First Keyframe position (usually the Rest Pose position).
3. Select all bones (A-key, A-key), then insert a keyframe (Toolshelf → Keyframe Insert). ALL bones must be specified for each keyframe.
4. Duplicate the start keyframe (select all the keyframe components in the Dopesheet window and hit Shift-D) then drag the duplicate to the desired end time. This provides a loop from the starting position back to the starting position. Note that keyframe components in the Dopesheet are YELLOW when selected.
5. Create a middle pose. For example, select Pose → Copy Pose, then select Pose → Paste X-flipped Pose, to create a copy with the legs in opposite positions from their start (and end) positions.
6. Set the “current time” in the DopeSheet window to half-way between the start and end time.
7. Insert a Keyframe to complete a “walk-cycle” (confirm with PLAY).

Convert the Animation Sequence (Keyframes) into an Action

1. Change the dopesheet window into an Action Editor. (use the drop-down to the right of the Key menu)
2. In the Action Name text box, the action probably has a name like “armature action”. Change its name to something more descriptive, such as “Legs_walk”.

Create Animation Sequence #2 (e.g., “Arm Waving”)

1. In the 3D View window, clear all the transformations from the pose:
   a. go back into Pose Mode (the Armature object must be selected)
   b. Select all bones (A-key, A-key)
   c. Pose → Clear Transform → All
2. In the Action Editor (DopeSheet) window, click the “+” in the header bar to add a New Action.
3. Type a name in the Action Name text box, such as “Arms_wave”.
4. Follow the steps above, under “Create an Animation Sequence”, to define a new animation: Pose the arms, select all bones, insert keyframe, create second pose, select all bones, insert keyframe, etc.

Export the model, skeleton, and both animations

Don’t forget that your model will need a UV-unwrapping, possibly a material, and you will need to export each animation separately.

Instructions for exporting the model & animations are in handout #04.

Instructions for importing the model & animations, and then playing them, in a RAGE game, are shown in the provided code sample.