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.