

Hello X3D Authors 10-step process

- 1. Pick target.** The target node is a Transform, and the target field is *set_rotation*.
- 2. Name target.** The Transform is named *DEF='EarthCoordinateSystem'*.
- 3. Check accessType and data type.** As shown by the Transform node field-definition table in Chapter 3 and the X3D-Edit tooltip, the *set_rotation* field has type SFRotation.
- 4. Determine whether Sequencer or Script.** These special node types are not applicable to this example, because the data type for *set_rotation* is SFRotation which is a floating-point type.
- 5. Determine which Interpolator.** The animating OrientationInterpolator is named *DEF="SpinThoseThings"* and placed just before the Transform.
- 6. Triggering sensor.** A triggering TouchSensor is added next to the geometry to be clicked, and then named *DEF='ClickTriggerTouchSensor'*.
- 7. TimeSensor clock.** The TimeSensor is added at the beginning of the chain, named *DEF='OrbitalTimeInterval'* and has both the *cycleInterval* and *loop* fields set.
- 8. Connect trigger.** Add ROUTE to connect the triggering TouchSensor node's *touchTime* output field to the clock node's *startTime* input field.
- 9. Connect clock.** Add ROUTE to connect the clock node's *fraction_changed* output field to the interpolator node's *set_fraction* input field.
- 10. Connect animation output.** Add ROUTE to connect the interpolator node's *value_changed* output field to the original target input field, *set_rotation*.

X3D for Web Authors, Figure 7.5, pp. 193-195.

<http://X3dGraphics.com/examples/X3dForWebAuthors/Chapter07-EventAnimationInterpolation/HelloX3dAuthorsAnimationChain.x3d>

10-step process for constructing animation chains, applied to animated HelloWorld example

I strongly recommend you print this out (or keep it handy) and check off each step as you proceed. After a few times you will find that you are doing this without needing the checklist. Keeping a consistent pattern enables you to avoid thinking that the various X3D animation nodes are “really different” when actually they are not. It also helps you avoid skipping steps and making mistakes that may be hard to debug afterwards.