Altair HyperView 2019 Tutorials

HV-5030: Tracing Nodes and Components during Animation

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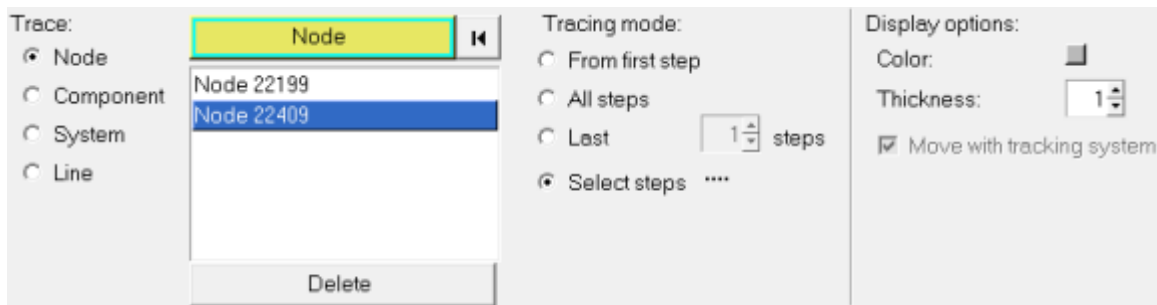
In this tutorial, you will learn how to:

- Trace a component during animation
- Trace a node during animation

Tools

To access the **Tracing** panel:

- Click the **Tracing** panel button on the **Annotations** toolbar.

  OR

- Select **Annotations > Tracing** from the menu bar.

The **Tracing** panel allows you to trace a node, component, system, or a line during an entire animation or through selected time steps of an animation.

Exercise: Using the Tracing Panel

This exercise uses the model file, `truck.key` and the corresponding `d3plot` file as the results file.

Step 1: Trace a component during the animation.

1. Load the `truck.key` model file and the `d3plot` results file, located in the `animation\truck` folder.

2. Choose the left view of the truck, by clicking on the **XZ Left Plane View** button on the **Standard Views** toolbar.

3. Click the **Tracing** panel button on the **Annotations** toolbar to enter the **Tracing** panel.

4. Under **Trace**, turn on the **Component** option.

5. Pick the rear tire of the truck.

Or

If you know the ID of the component that you want to trace, you can enter it from the input collector.

– Click *Component* and select *By ID*.

– Enter the ID.

– Click *Apply*.

– Close the dialog box.

6. Verify that **Tracing mode** is set to *From first step*.

This allows you to trace the selected component from the first step of the animation through the time step where the animation is stopped.

7. Animate the model 🔵.

8. Stop the animation.

Observe that the rear tire has been traced from the first step of the animation through the time step where you stopped the animation.
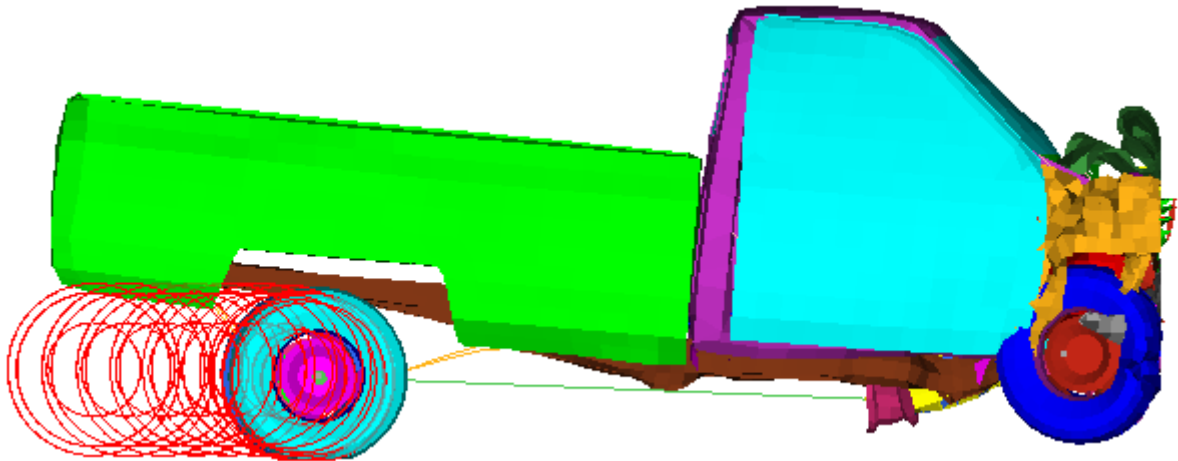
9. Open the **Animation Controls** panel 🔵 and change the current time.

Note that the trace changes accordingly.

Step 2: Trace a node during animation.

1. Go back to the **Tracing** panel.

2. Delete the component that you have traced.

3. Under **Trace**, turn on the *Node* option.

4. For **Tracing mode**, select *All steps*.

   This allows you to trace the node you have chosen from the first time step of the animation through the last time step of the animation, irrespective of where you have stopped the animation.

5. Pick a node on the tire.

   Since you have already animated the model, the node trace is generated automatically.
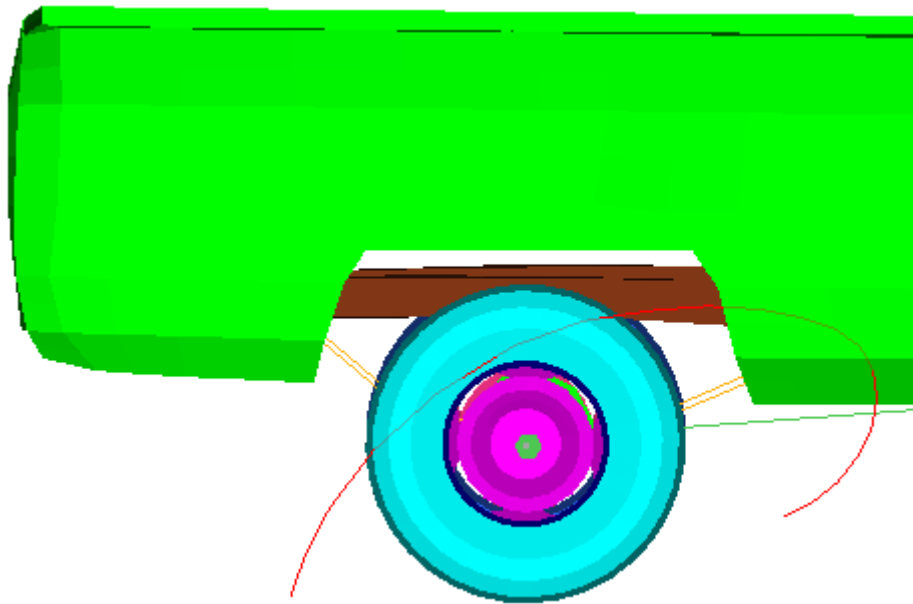
6. Change the **Tracing mode** to *From first step*.

   Observe the change in the trace that is generated.

   Note   If you only want to trace the last few time steps, change the **Tracing** mode to *Last* and choose the number of time steps which you are interested in.