Deep Exploration 5.0 Tutorial
Camera Path Trajectory Editing #2

Welcome to the world of 3D with Right Hemisphere!

The aim of this tutorial is to learn how to use Deep Exploration to:

- Create a target camera path.
- Edit a target camera path interactively.

Assumptions

Certain assumptions have been made regarding this tutorial:

- You should be familiar with 3D concepts.
- You should be familiar in the use of Deep Exploration.
- Note that the display of the model on your computer during this tutorial may be different depending on the graphics card installed on your computer, the screen geometry, and the colors and placement of objects that you choose.

Features Covered

- Understanding and creating a target camera path.
- Editing a target camera path.

Requirements

The following software and files are required for this tutorial:

- Deep Exploration version 5.0.x.
- The file ‘Planet.rh’ accessible to your computer.

Completion Time

This tutorial should take approximately 30 minutes to complete.

Before You Begin

- Ensure you have the 3D file accessible to your computer.
- Complete Tutorial #1 before proceeding.

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Understanding the Camera Target

The 'camera target' is the area of the scene that the camera points at. If the target point moves, i.e. is animated, the camera will follow the path of the target automatically without modification to the camera path.

The camera target can be a single point in the scene that remains static while the camera moves around the scene (see Tutorial #1), alternatively, the camera target can move around the scene or model while the camera remains in the same position but adjusts it's view to follow the target path.

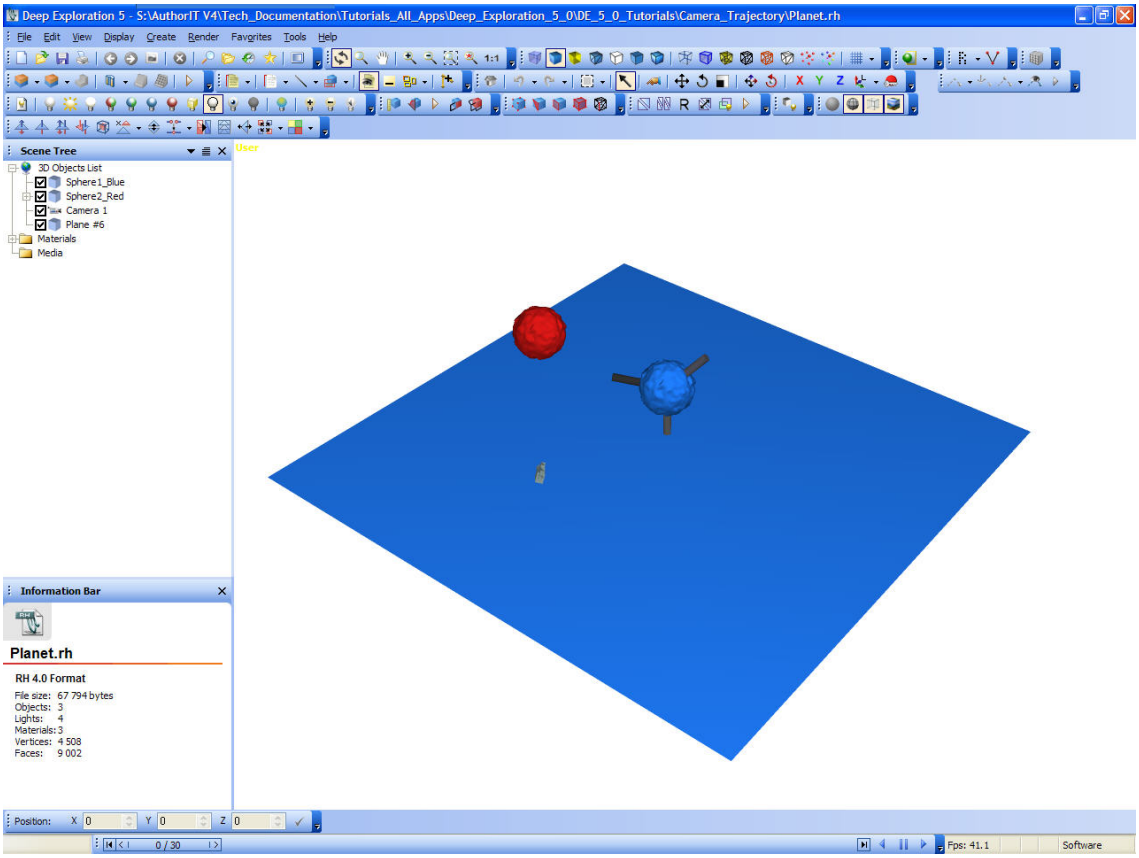
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The Target Camera Path

To edit a target camera path:

1 From the **File** menu select **Open** and navigate to the file **Planet.rh**.

2 When the file has loaded hide the **Folders** panel, your screen should look like this:



3 Expand the **Sphere2_Red** object in the Scene Tree panel.

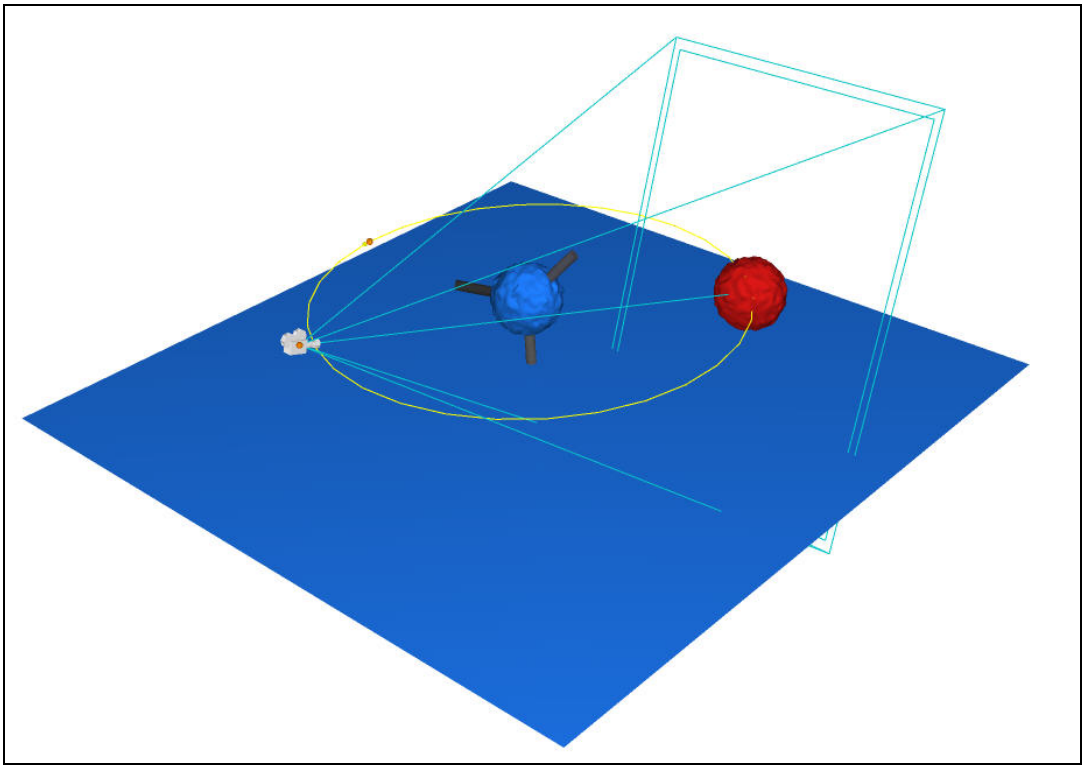


4 You will see that the **Camera 1.Target_Red** object is a part of the **Sphere2_Red** object. This is because you want the **Camera 1** object to follow the path of the **Sphere2_Red** object when it rotates around the **Sphere1_Blue** object.

Tip: Play the sequence with the objects in their default positions, the Camera 1 object will follow the path of the Sphere2_Red object as it rotates. Try moving the Camera 1.Target _Red object back to the top level in the Scene Tree panel, the Camera 1 object no longer follows the target object.

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5 To see how the animation works, press the **Play** button, , on the Animation Controls toolbar, then hold down the **CTRL** key and right click the **Camera 1** object and the **Camera 1.Target_Red** object. You will see that the Camera 1 object follows the path of the Sphere2_Red object.

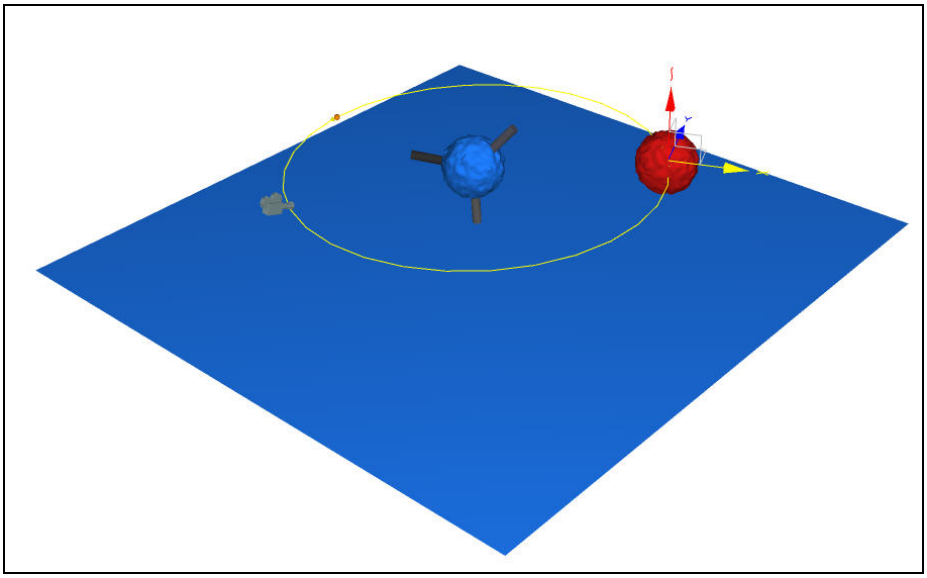


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To move the camera target path of the Sphere2_Red object

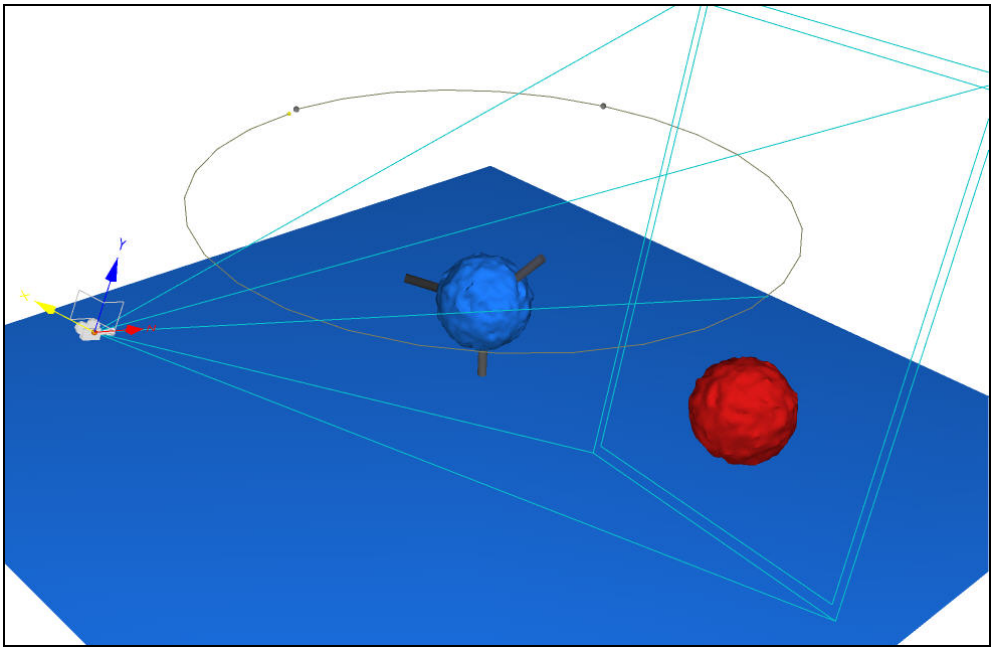
1 Highlight the **Sphere2_Red** object in the Scene Tree panel, the path (yellow) will be shown in the viewport.

2 Select the **Move** icon, , from the 3D Editor toolbar.



3 Then select the **Z axis** (red) and move the object vertically, you will see that the whole path moves as one object.

4 Move the path a short distance away from the object and play the animation again and highlight the Camera 1 object in the Scene Tree panel. You will see that the Camera 1 object now targets and follows the line of the new path and not the center of the Sphere2_Red object.



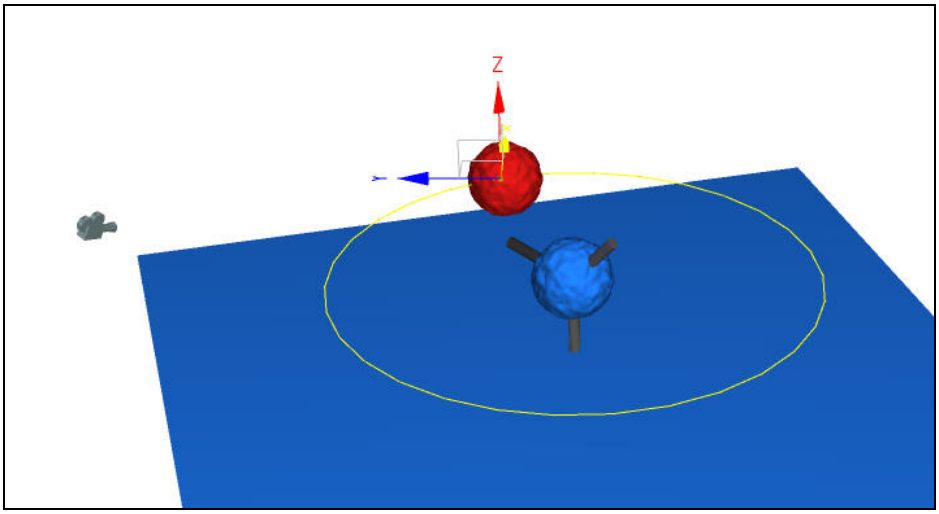
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To change the camera target path of the Sphere2_Red object

5 Highlight the **Camera 1.Target_Red** object in the Scene Tree window, the path (yellow) will be displayed in the viewport.

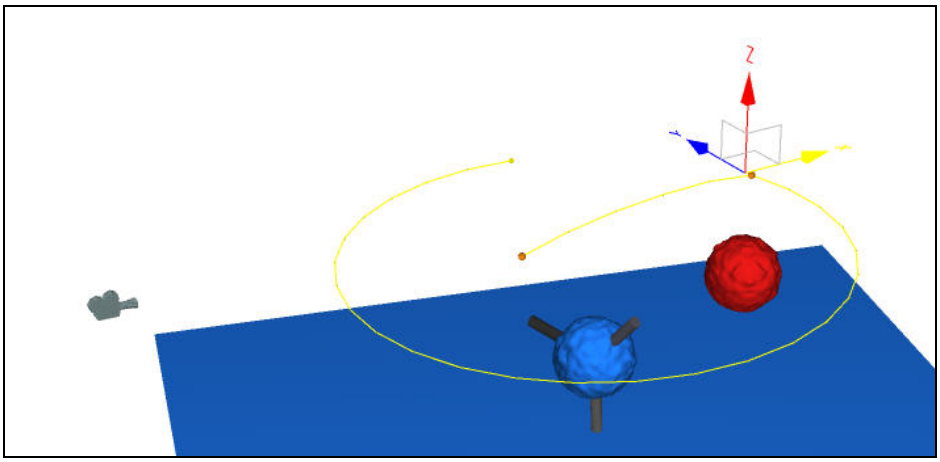
6 Select **Edit Keyframes**, , from the 3D Editor toolbar.

7 Select the Move icon, , from the 3D Editor toolbar.



8 Move the keyframe slider to frame **5**.

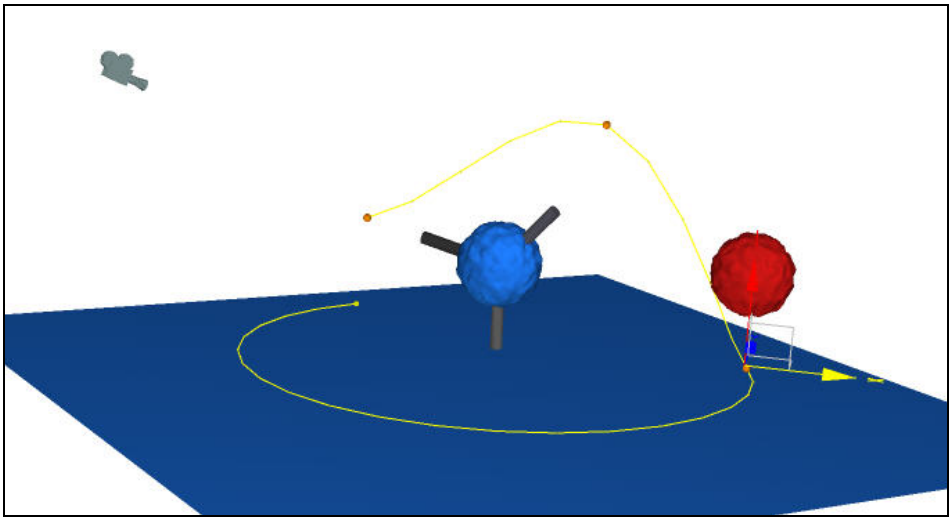
9 Move the **Z axis** (red) upwards a small amount. The start point of the path will remain fixed and the path will move to follow the new position.



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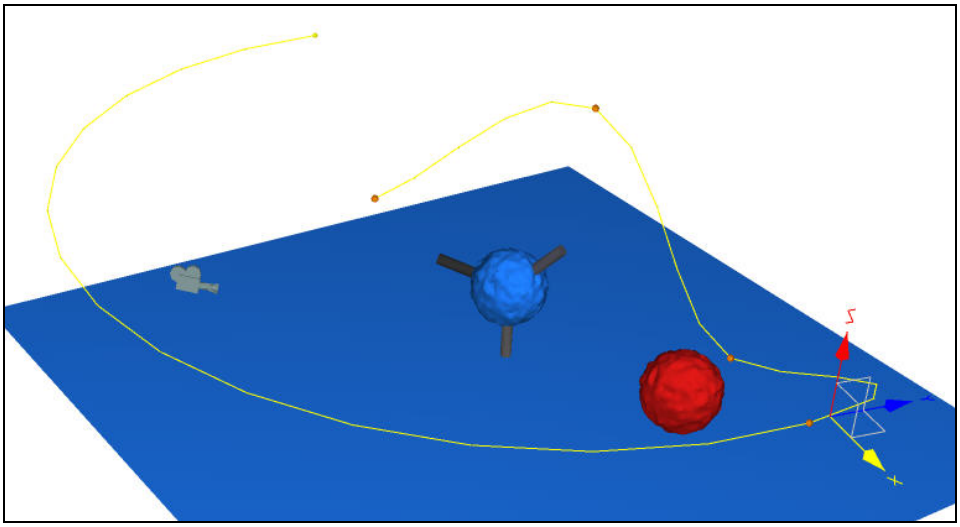
10 Move the keyframe slider to frame **10**.

11 Move the **Z axis** (red) downwards to a position below the original path. If necessary rotate the model to see the path more clearly.



12 Move the keyframe slider to frame **15**.

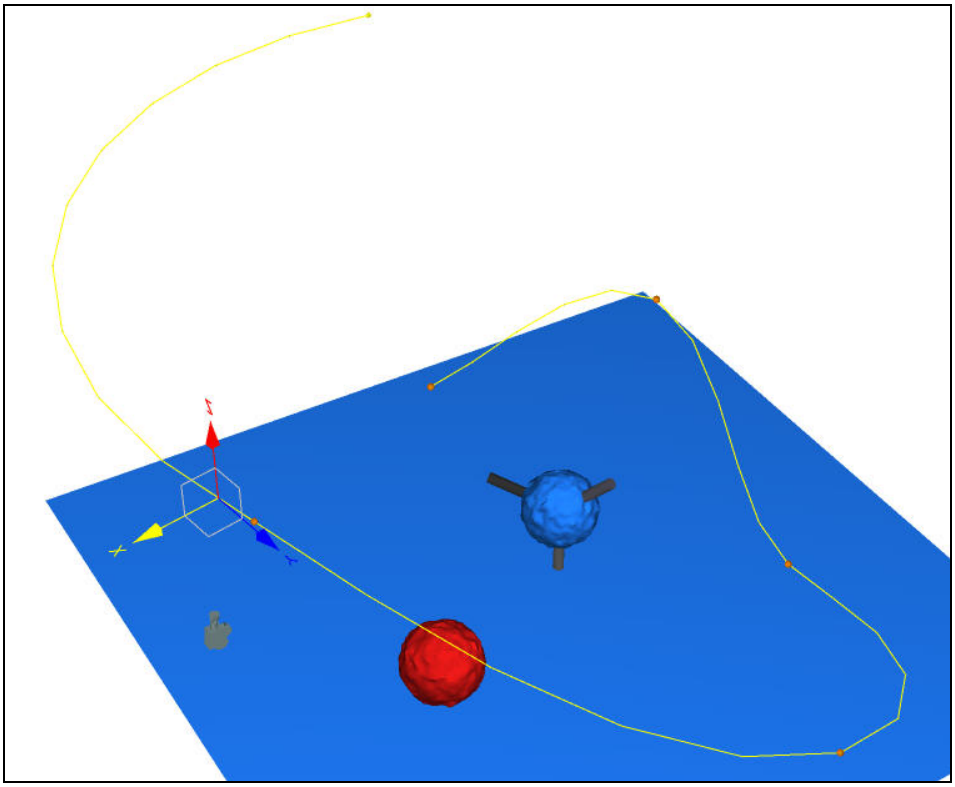
13 Move the **Z axis** (red) upwards to a position above the original path, then move the X axis (yellow) outwards. If necessary rotate the model to see the path more clearly.



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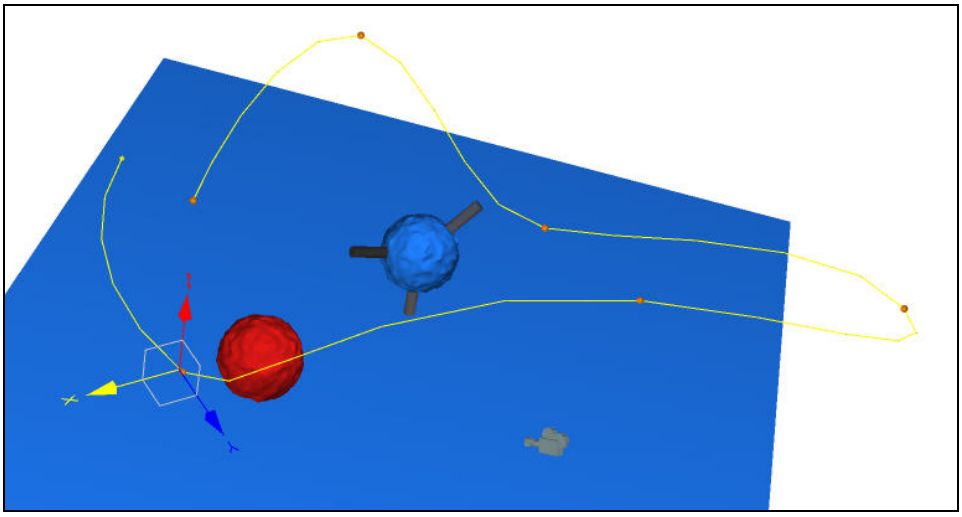
14 Move the keyframe slider to frame **20**.

15 Move the **X axis** (yellow) inwards, then move the **Z axis** (red) upwards. If necessary rotate the model to see the path more clearly.



16 Move the keyframe slider to frame **25**.

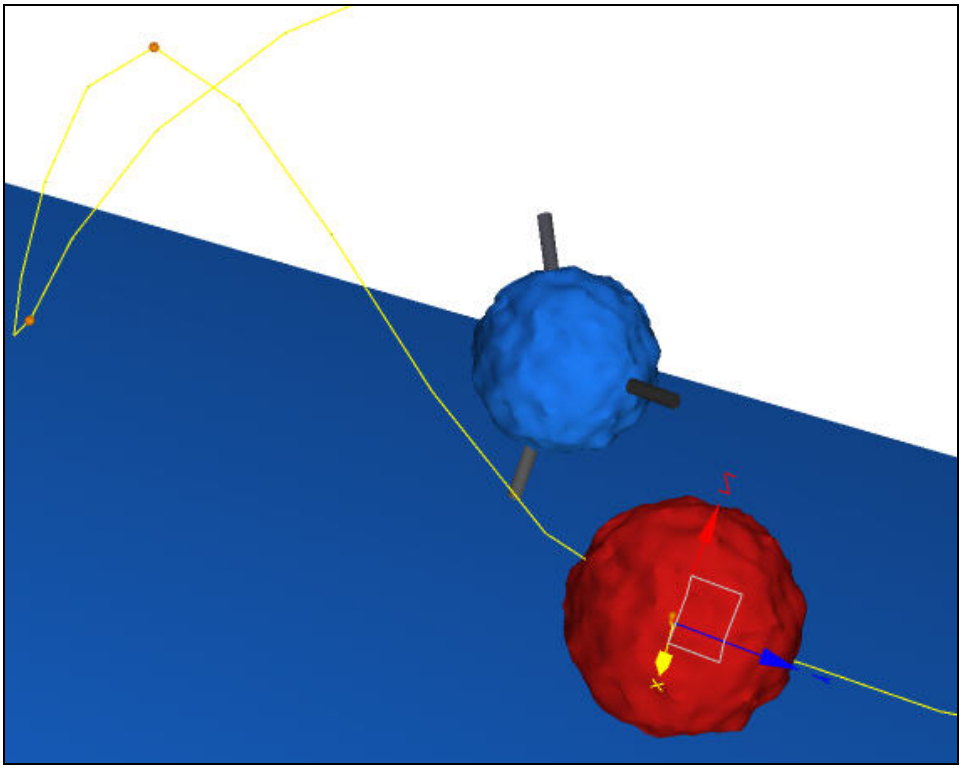
17 Move the **X axis** (yellow) inwards, then move the **Z axis** (red) downwards. If necessary rotate the model to see the path more clearly.



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18 Move the keyframe slider to frame **30**.

19 Move the axes so that the end point is almost the same as the start point. If necessary rotate and zoom the model to see the path more clearly.



20 Zoom out so that you can see the whole scene and press the **Play**, , icon on the Animation Controls toolbar. You will see that the Camera 1 object now follows the new path. To see the animation more clearly slow down the animation to 10% using the Animation Options dialog.

Tip: Display 2 views in the viewport (side by side), have one view take a User view and the other the Camera 1 view. Highlight the Camera 1.Target_Red object and the Camera 1 object to see the paths.

Congratulations, you have now moved and changed the target path and played the animated sequence.

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