

Exercise 3 Animation

1. Editing Animation

This exercise consists of creating a circular path sequence around a mobile, which hangs over a baby's crib, and calculating this animation's 5 second duration.

Objective

To select "Edit Animation" from the "Windows" menu and view the existing sequence.

- Open Art•lantis Render and open the "Baby Start" file, which is located in the sub-folder of "Tutorial 3" in "Tutorial".

Once the file is open, the scene displayed in the preview window is:



Macintosh



Windows



So that you can fully concentrate on creating this animation, the rendering is provided for you. The baby's room contains all of the necessary adjustments to make this rendering as photo-realistic as possible. The only thing missing is the baby!

There is always a default sequence consisting of a circle aimed at the circle's center, passing by the position of the existing fixed camera.

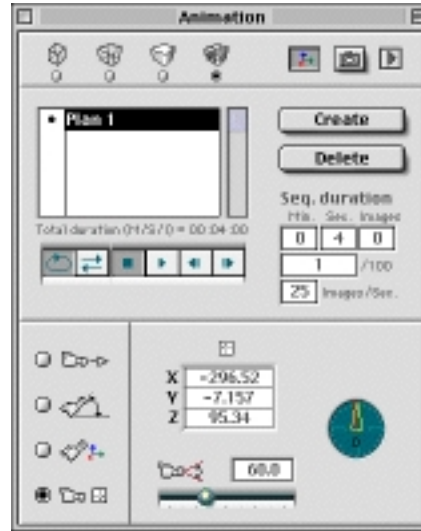


We will use this sequence to create our animation.

- Select “Edit Animation” in the “Windows” menu.

With this command, you can access three control windows: the “Animation” dialog box, the preview window and the wireframe projected view window.

In the “Animation” window, there is an existing sequence: **Plan 1**.



- Click on the “projected view” icon to display and observe the sequence position in your 3D scene (preview window).



The path, created from the existing fixed camera, consists of two points that are able to be edited. The first corresponds to the placement of the first fixed camera (the first animation image) and the second is diametrically opposed to the first.

To visualize the existing path (i.e. to start the animation), you can access the animation's control mode, located in the "Animation" dialog window:



- **Click on the "Play" button and visualize the animation in the preview window.** The default time of the sequence is 4 seconds.

The image's quality is purposefully simple and the rendering lacks materials, mapping, lighting and calculation options (Ray tracing, Transparency, Shadows). But, the display permits you to appreciate the path and the animation's fluidity: the number of images per second.

The higher the number of images per second, the higher the fluidity of the animation and the less broken-up it will appear. To give you an example of number of images per second, there are 25 images per second on television.

Try playing with the parameters yourself:



- **Modify the number of images per second by clicking on this parameter. Change the value from 15 to 25.**

The total number of images is now 100 images per second and the animation in the preview window is even more fluid than before.

On the other hand, the final calculation time is even longer. But this should appear to be logical, realizing that there are more images that need to be calculated.

A path is, therefore, composed of two different parameters that are determined by the user: the **sequence** (in seconds) and the **number of images per second**.

In this exercise, the animation will be calculated using 15 images per seconds.

- **Verify your values once more; make sure you have 15 images per second.**

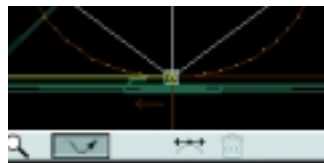
2. Modifying the path

Objective

To modify the path and move it around the mobile.

Before moving the path around the mobile, begin by reducing the size of the circle, selecting one by one the two editable points of the path:

- **Click on the first editable point to select it:**



- Hold down the mouse button and move it towards the second editable point:
- Repeat the same operation using the second editable point.

Now you must use the 4 tangents, corresponding to the two points, to redo the path's circle:

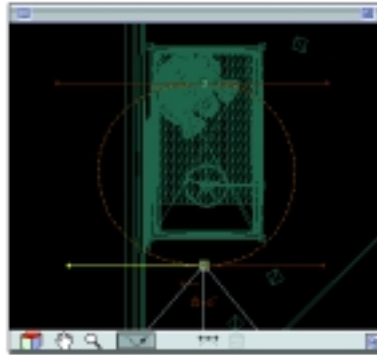
- Select one of the first point's two tangents and click on its end, holding down the "Shift" key and sliding on the horizontal axis towards the point in order to reduce it.
- Repeat the same operation with the 3 other tangents to form a new circle with a reduced diameter.



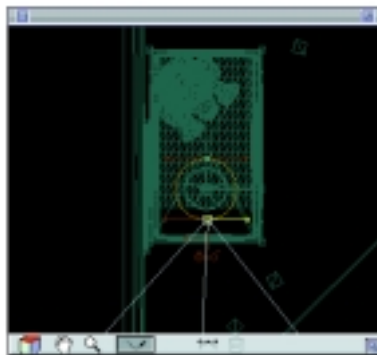
To move the totality of the sequence around the mobile, which hangs above the crib:



- Select one of the two editable points, hold down the "Ctrl" button and move the totality of the sequence around the mobile. Zoom in on the window around the crib to get a more precise adjustment.



- Reduce the circle's size once more to perfectly adapt it around the mobile, and while playing with the position of the two editable points and the tangents (with the "Shift" button). Zoom in on the window if necessary.



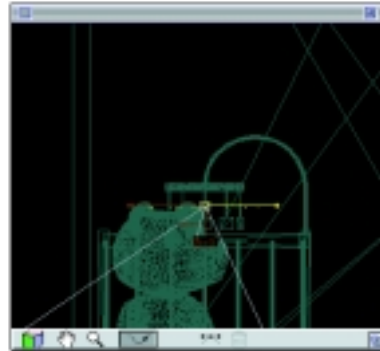
- Click on the "Play" button in the animation's control mode.

The circular path is well placed, but the camera's aim during the path was not well positioned. We need you to fix the mobile's center along the entire path.

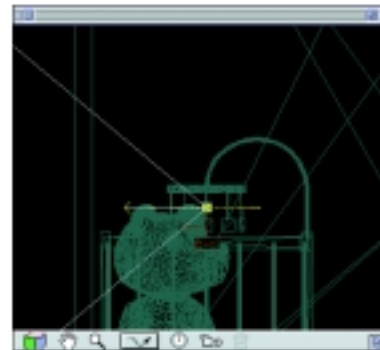
- Click on the "Stop" button to stop the animation.



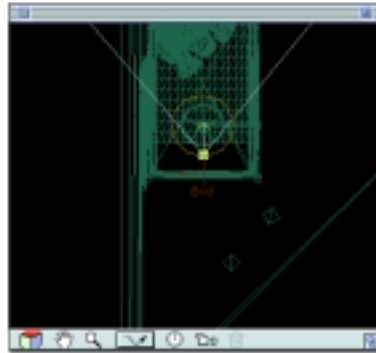
- In the projected view window, select the frontal view by clicking on the cube in the left bottom corner. Zoom in once more using the window around the mobile (you can use the “+” and “=” keys). Next, select the editable point, holding down the “Ctrl” key and lower the mobile sequence half way:



- Click on “Edit path” to enter into the “Camera behavior” mode. Select the end of the arrow, and while holding down the mouse button, move it along the same horizontal line as the camera:



- Next, display the top view by clicking on the cube again. Select the end of the arrow and move it to the center of the mobile:

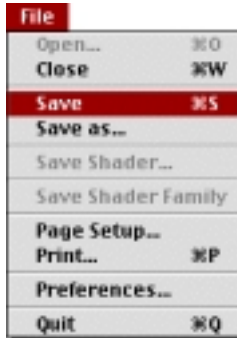


- Lower the opening of the focal angle from 105° to 80° in order to obtain the closest framing around the mobile.
- Test the result by viewing the animation in the preview window:



For the final calculation, modify the total duration of the animation by typing in **5 seconds**. Note that all of the path's modifications, the camera behavior, the length of the duration and the number of images per second take place in real time in the preview window.

You have now finished assembling the path. Your animation is ready for the final calculation.



Before you start the calculation, save your file.

3. Launching the final calculation

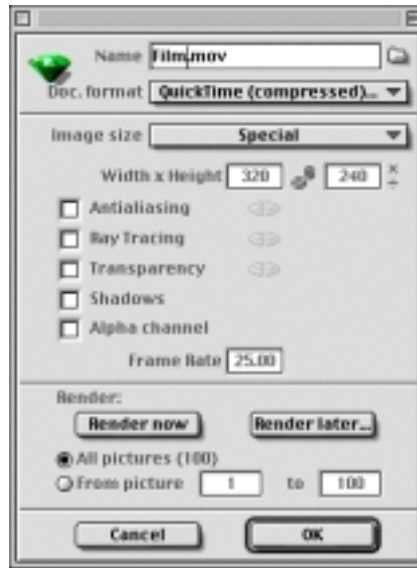
Objective

To choose your rendering parameters and start the final calculation for your animation.

To obtain 5 seconds of film, at 15 images per second, Art•lantis Render must calculate 75 images. Please note that if you have a moderately powerful desk top, the calculation time is 45 minutes.



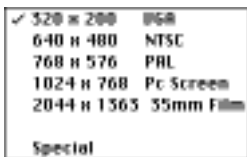
• Activate “Render Animations” from the “Render” menu. The following dialog box appears:



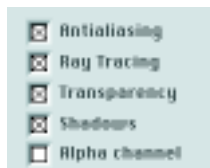
- Click on the “Folder” icon, selecting the “Tutorial 3” folder then click on “Select ‘Tutorial 3’ folder”.



- Name your animation: “Baby”.
- In the “Format” menu, choose “QuickTime (compressed)”.



- In the “size” menu,
- choose “320 x 200 VGA”. This is the animation size and the film with play in the QuickTime format.



- Check the calculation options: Antialiasing (Good), Ray Tracing, Transparency, Shadows.

☒ all pictures (75)
☐ from pict.

- Check the “all pictures (75)” box.

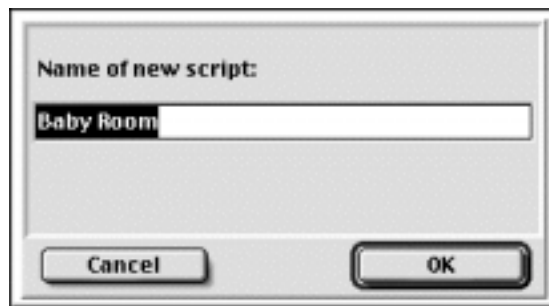


- Click on “Render now” to begin the final calculation immediately.



In order to defer the final rendering calculation, do as follows:

- Click on the button “Render later...”
- Enter the name “BabyRoom” in the resulting name dialog.



- Click on the OK button to validate the deferral.



The deferred rendering is then represented by a script which will be ran with the specified parameters. The script has the name “**BabyRoom.txt**” and is saved in a folder named Scripts, located in the Art•lantis folder.

In Exercise 4, we will see how to launch the collection of deferred

renderings.

At the end of the calculation, a new file will be created in your "Tutorial 3" folder: **"Baby.mov"**.

To open this file and view the film:

- Double click on the **"Baby.mov"** file.

