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A CreativeCOW Cinema 4D Tutorial

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Jannis Labelle demonstrates:

Modelling a Bird and Animating its Flight

Part Four: Animating the Bird



Jannis Labelle

[Email Address](#)

[Labelle Art](#), London, England

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Article Focus:

In this tutorial, Jannis Labelle demonstrates modelling and animating a bird in flight. This is a follow up of his head tutorial so he will not go into a great detail of describing techniques in minute detail, instead he will try to introduce you to some alternatives in modeling, texturing and animation. It is a tutorial for intermediate level users, you would need to know your way around the view ports, tools, the Attribute Manager and be comfortable with using Photoshop. Still, even as a beginner you will find a lot of information here, so with a bit of effort you should get going. The task will be to model a bird, texture it and animate it, using some shortcuts to demonstrate that there many ways to skin a cat, or a bird for that matter.

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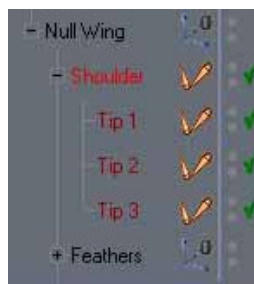
Jannis has included a file of the finished model for you to [download here](#) and use as you wish. If you are comfortable with your modeling you can skip this part, grab the mesh and go to the texturing, rigging or animating part, so you can use the tutorial to suit your needs. What ever part you choose to do Jannis hopes that you have fun and learn something. If you do use his model a small mention will be appreciated. But try to make your own, modelling comes only from persevering.

Animating the Bird

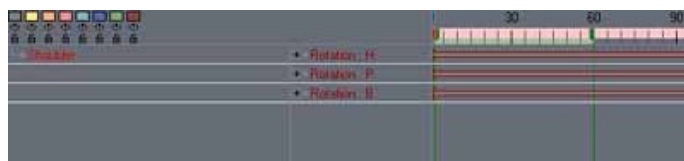
When starting out in animation it is a good idea to start with something easy and humans are perhaps the most difficult. Start with fishes or birds because they both float and don't have to deal with gravity which brings allot of problems to the animator. Also their motion is cyclical, so you can repeat a bird flying or a fish swimming quite well. In this animation I have not given you any settings, because creating motion is case of 'feel' and not of measurement. Too much measurement make movement too mechanical. I have also included a movie to show you the end result and to help you fine tune your movement, but this is a tutorial of how you can utilize Cinema R8 for a project like this.

You can get the finished file from [Here](#)

1. Let's start animating. Import your model with the bones or use the one provided. Select the **shoulder bone (01)** and drag and drop it in the **Timeline (02)**. Make sure in the **Timeline** you have chosen **Edit**, **remove all** to empty so you only have the **Shoulder** bone you want to animate. With the **rotation** tool rotate the shoulder bone as in (03)
2. Turn off all tracks other than **Rotation** and in frame **1** record a keyframe (02).

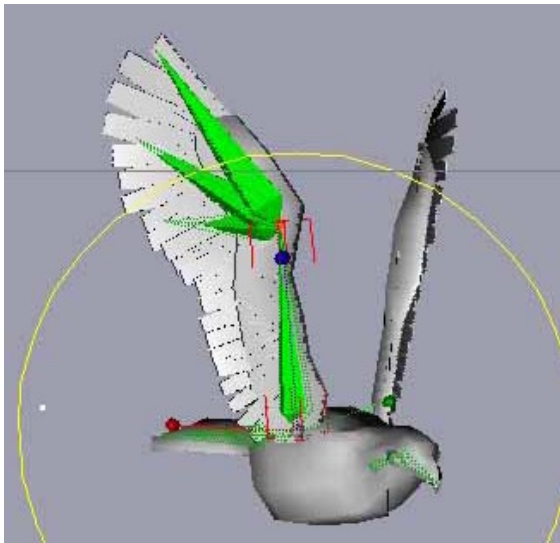


01

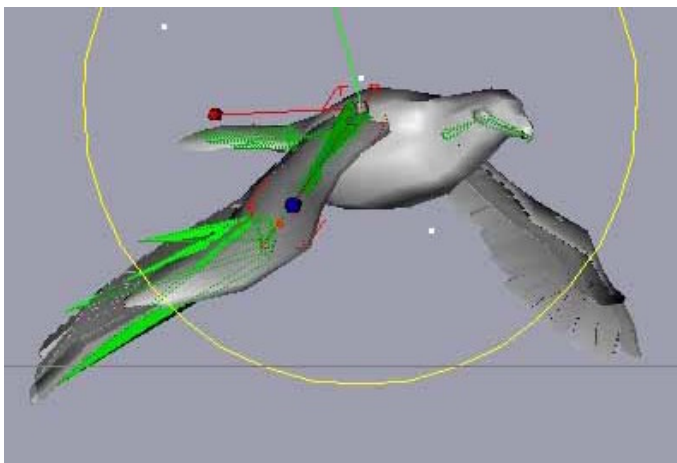


02

1. Go to frame **20** and again using the rotation tool move the Shoulder bone as in (04)
2. Record another keyframe (05)

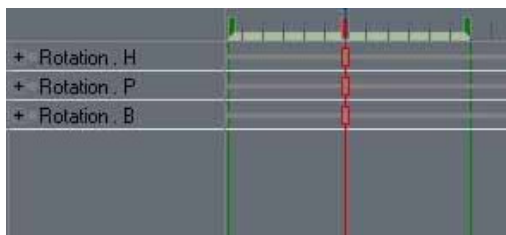


03

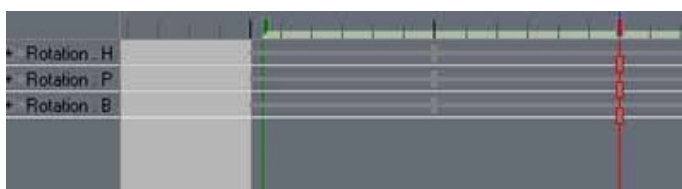


04

1. Select the first **rotation keyframes** and **Control-drag** them to copy them on frame **40 (06)**.
2. If you play the animation now, you will see the wings flapping once.

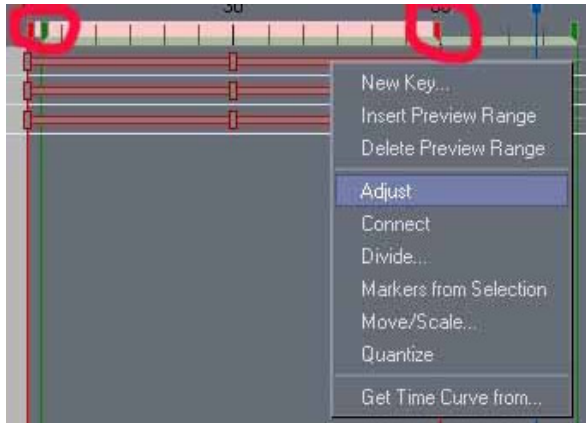


05

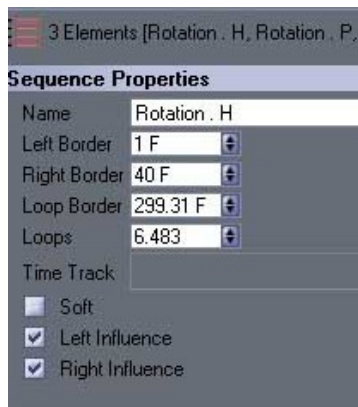


06

1. To make them flap repeatedly, **right click** on the sequences and choose **Adjust**. You will see the sequences adjust from the first to the last key frame.
2. In the **attribute manager** you will also see the **Sequences** properties (08). **Loops** indicates how many times your animation will loop over repeating itself, effectively how many wing beats you will get for the duration. Put a number there that divides your project's length exactly if you want your animation to play in a loop as a movie. The reason my inputs come in decimals is because I have adjusted the length of the animation to get better timing after I finished the project. The way you can do this is by dragging the red handles circled in (07). **Loop border** tells you how many frames you need to complete the loops so you can use this a reference to set your project settings.



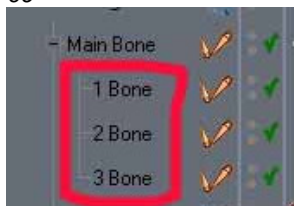
07



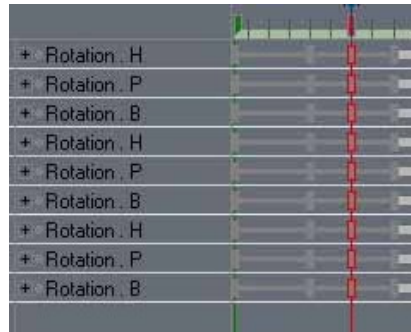
08

1. To give the wings a more realistic feel, drop the 3 end bones in the **Timeline** (09).
2. Record a keyframe for frame **1**, **20** and **40** same as the **shoulder bone** without making any changes.
3. At frame **30** bend all three bones to prepare the wing for the upward movement and record another keyframe (10).

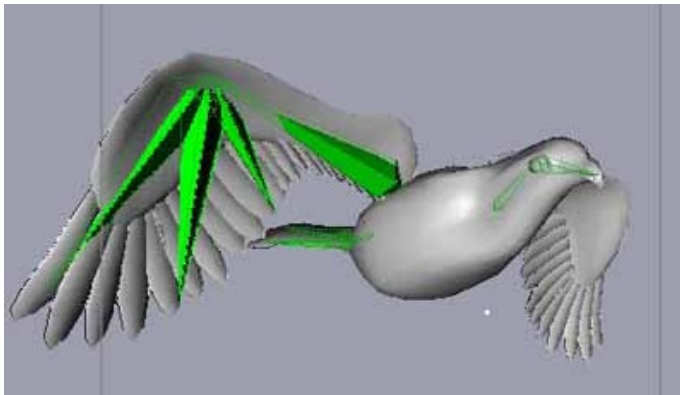
09



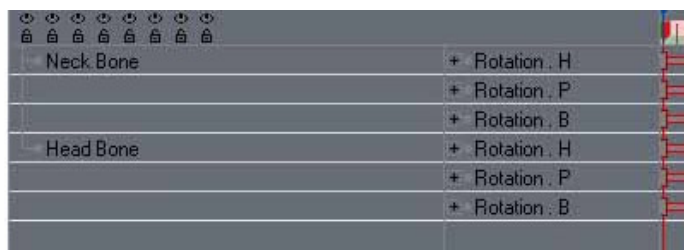
10



1. You can see now the wing folding realistically as it beats (11).
2. We have set an extra keyframe at frame 1 because it gives us the chance to set up another mini loop if it is needed.
3. Now we want to make some secondary motion for the head and the tail. Starting with the head, select both the Head and Neck bone and drop them in the Timeline (12).

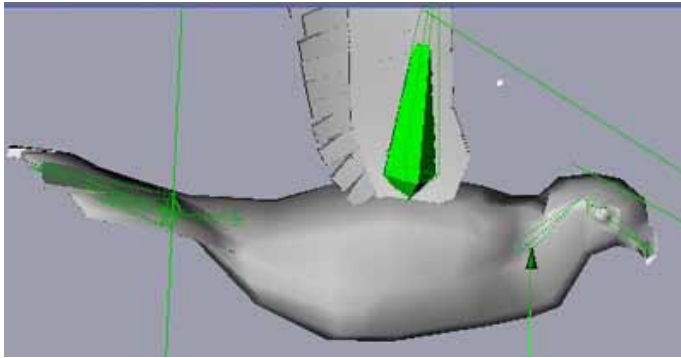


11

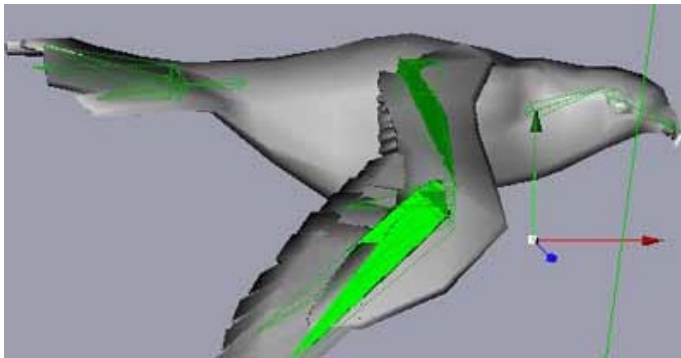


12

1. Go to frame **1** and at the up height of the wings lift the head up manipulating the **Head** and **Neck** bones. Record a keyframe (13).
2. Move to frame **20** and stretch the head forward and record another keyframe (14).
3. Control-drag all the keyframes for **Neck** and **Head** bones to copy them to frame **40**.
4. Now the head moves nicely in time to with the wing beat.
5. Select all the **sequences** and give them the same amount of **loops** as the **Shoulder** bone (08).



13

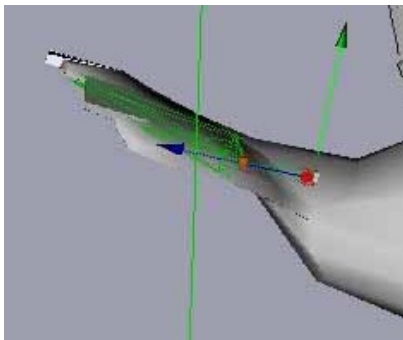


14

To create some motion in the tail, drag-drop all the tail bones in the **Timeline** (15), move them up in frame 1 (16) and record a keyframe.

Main Tail	+ Rotation . H
	+ Rotation . P
	+ Rotation . B
tail1	+ Rotation . H
	+ Rotation . P
	+ Rotation . B
tail2	+ Rotation . H
	+ Rotation . P
	+ Rotation . B
tail3	+ Rotation . H
	+ Rotation . P
	+ Rotation . B

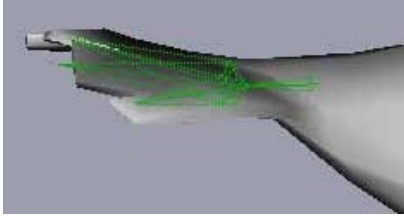
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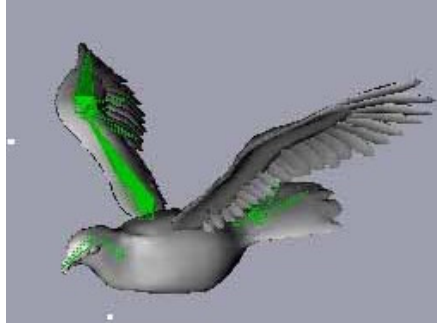
16

Move them down in frame 20 and record a keyframe(17) . Control-drag them to frame 40 and again input the correct amount of loops in the Sequence properties and your animation is finished (18).

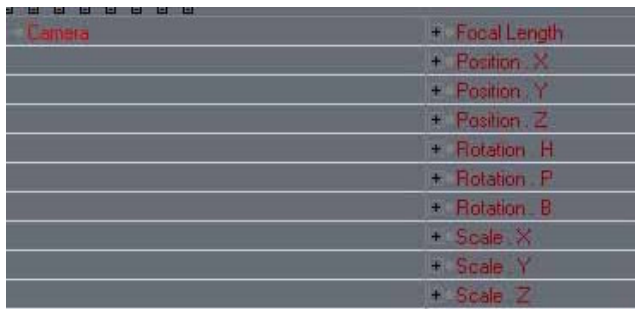
17



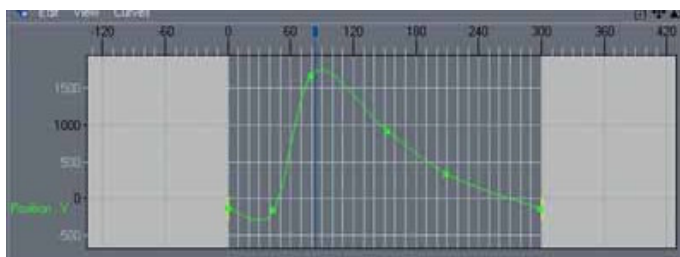
18



1. In order to create the feeling of flight, instead of animating the position of the bird I animated a camera (19). You can see all the tracks in the timeline.
2. I also used the Fcurve manager to animate manipulate the cameras properties. A lot of the time people ask in the forums about Align to spline animation of the camera, in most cases, this is the wrong choice. Animating with Fcurves is what you should try to get used to, but this should be the subject of another tutorial.



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Study the finished animation file that comes with this tutorial to get a better idea. I hope you had fun with this and you have learned something you can apply to any other project.

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