

Creating *animations* in an interface

An animation is a part of your interface. Examples of animations are: a balloon that is being filled with air, colliding balls, etcetra. You can put moveable and resizeable object like balls, lines, and rectangles in an animation. These objects can automatically change, for example their size, place, and colour, when you link them to a model variable.

In this chapter you learn how to create an animation in an interface.

Editing an interface

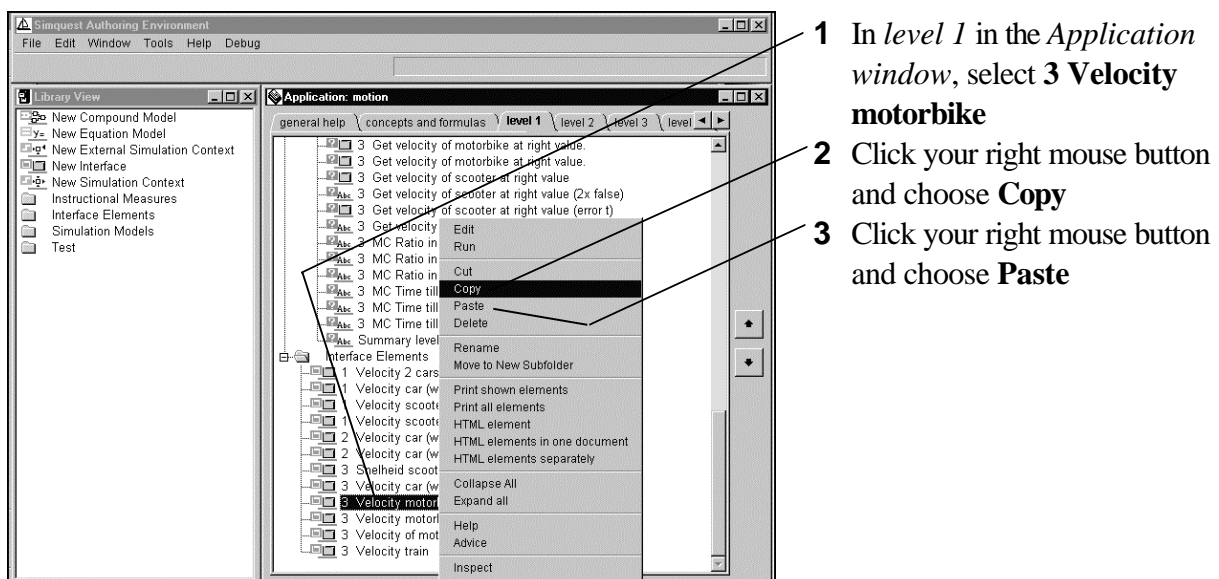
An animation is always part of an interface. Therefore, to create an animation, you first have to edit an interface.

Copying and renaming an interface

You are going to add the animation you are going to create to an existing interface. In this section, you select an interface, make a copy of it, and rename it.

Selecting and copying an interface

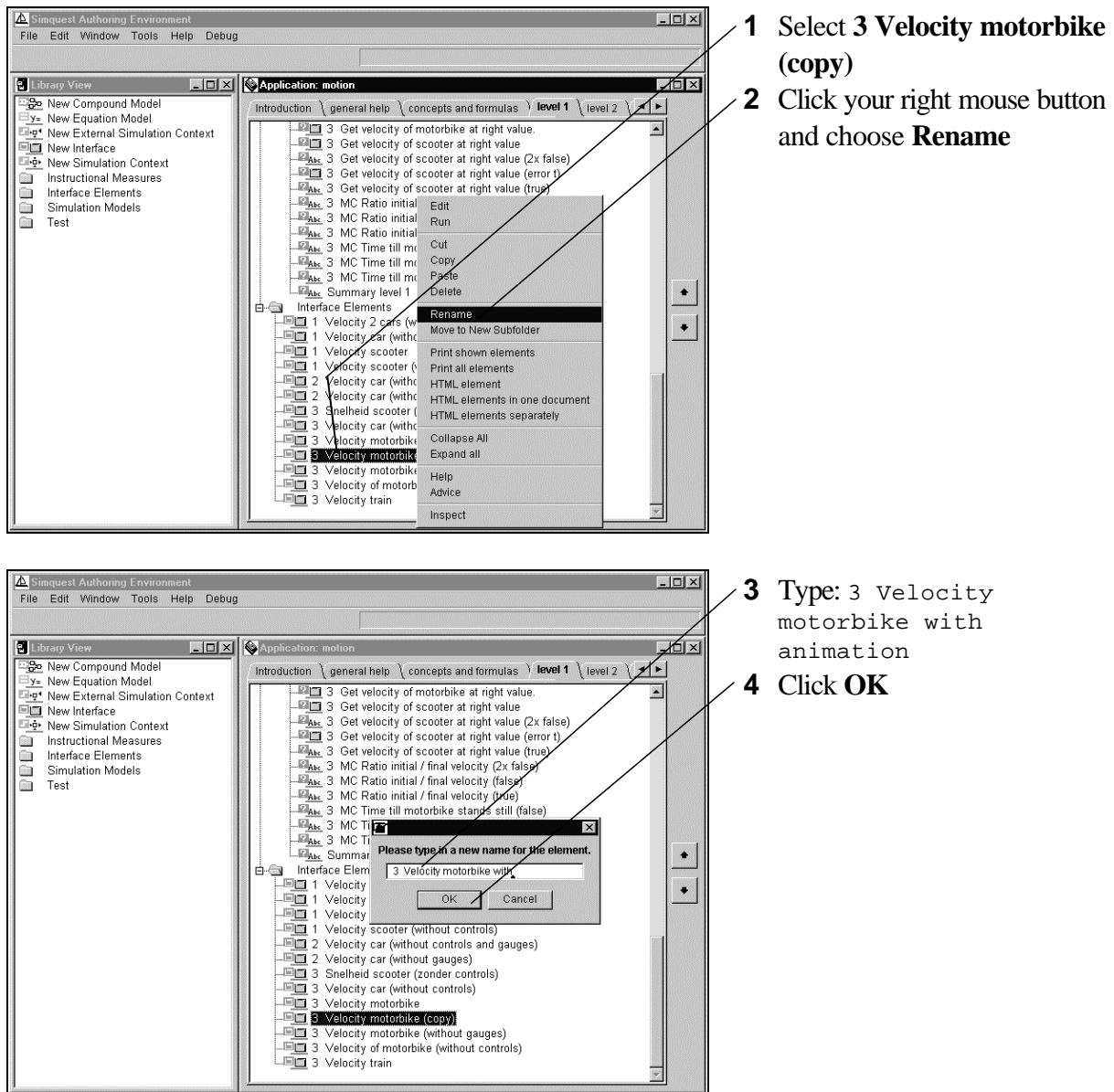
The Motion application contains several interface. You can select one and make a copy of it.



An interface with the same name and the extension '(copy)' is added to the application. Check if this is the case.

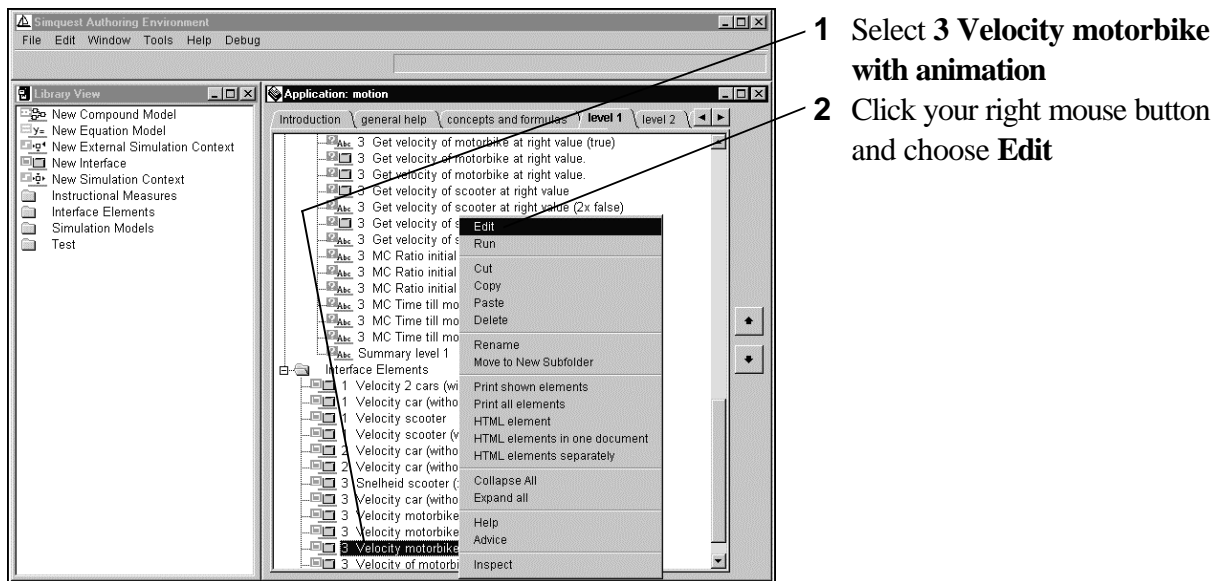
Renaming an interface

You can rename the interface. To keep a clear overview of the elements in your application, choose a name that describes the content of the interface



Editing an interface

To be able to add an animation to the interface, you have to edit the interface. This means opening its editor.



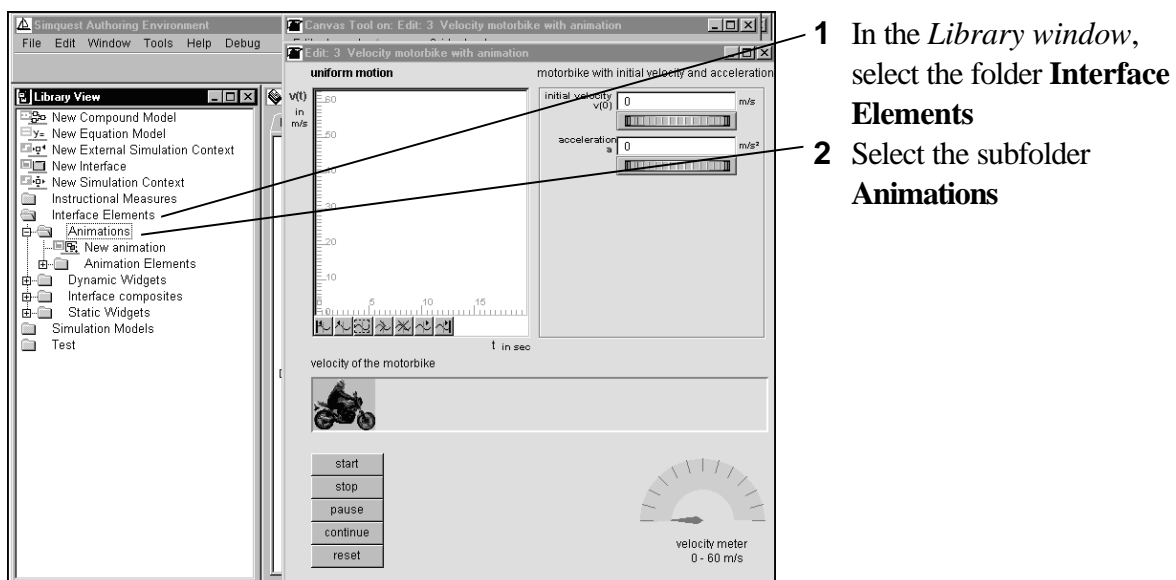
Adding and editing an animation

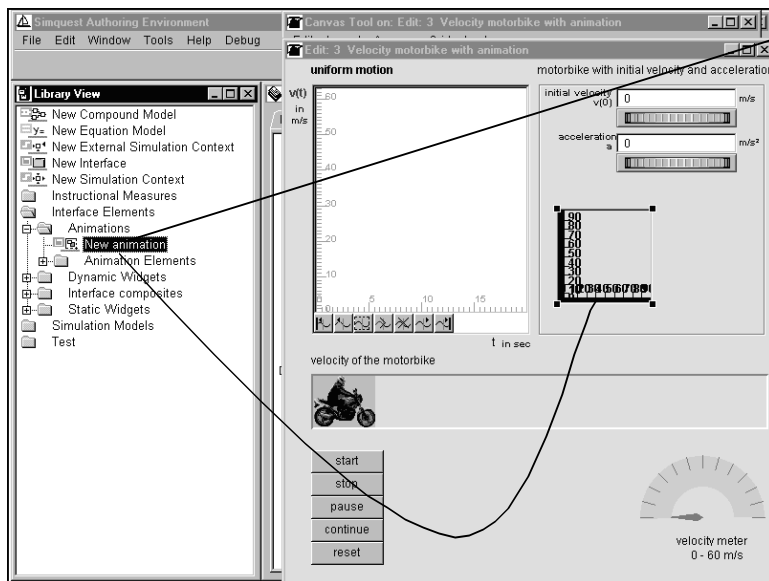
You can create an animation using the following general steps

- adding a new animation to the interface
- opening the animation editor
- adding animation elements to the animation
- specifying the animation element properties

Adding a new animation to the interface

The SIMQUEST library contains several elements to create an interface with. An animation also is such an interface element. You can now add a new animation element to the interface.



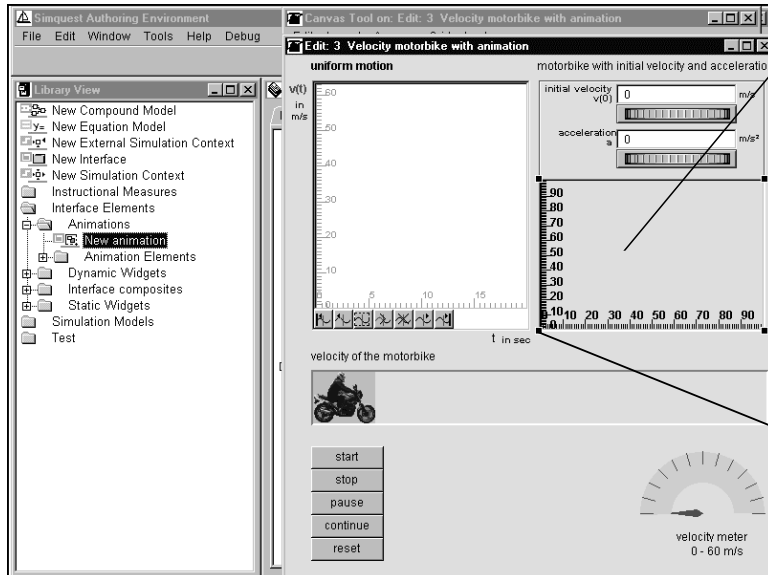


- 3 Select the element **New Animation**
- 4 Drag **New Animation** from the *Library* window and drop it into the *interface*

Check if the animation appears on in the interface. The animation looks the same as a graph.

Moving and resizing an animation element

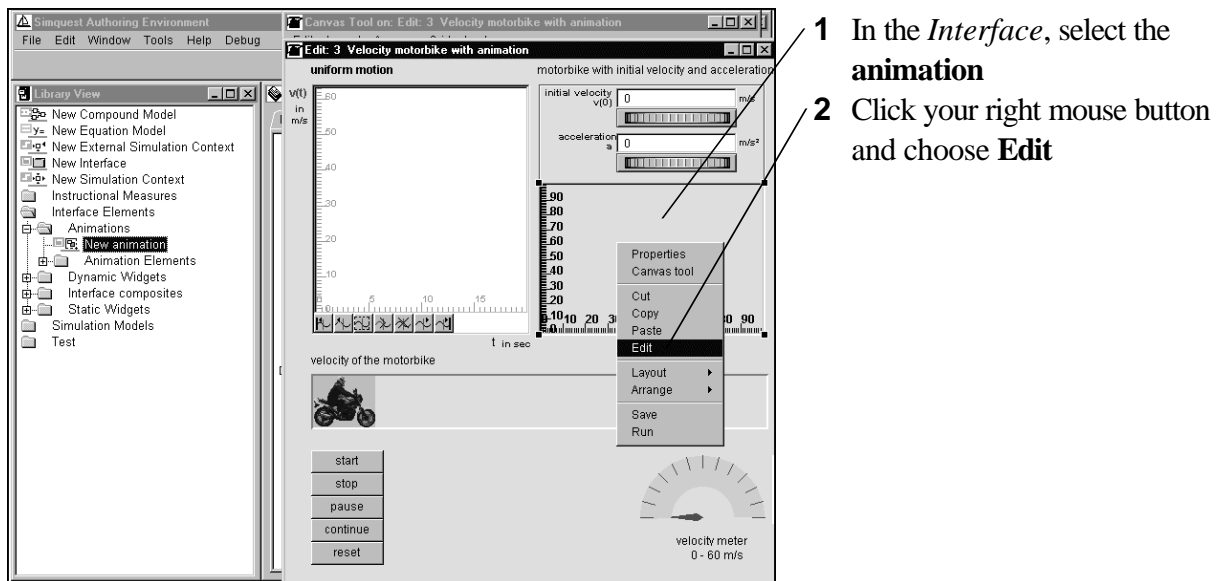
The animation you just dropped into the interface is probably not on the right place of the interface. It may also have a different size you probably want it to have. You can move the animation and change its size.



- 1 Select the **animation**.
You can see if an element is selected by the squares in the corners of the element
- 2 To *move* the **animation**, select it, hold the left mouse button down, drag the element to the appropriate place, and release the left mouse button
- 3 To *resize* the **animation**, select one of its corners, hold the mouse button down, drag until the appropriate size is reached, and release the mouse button

Opening an animation editor

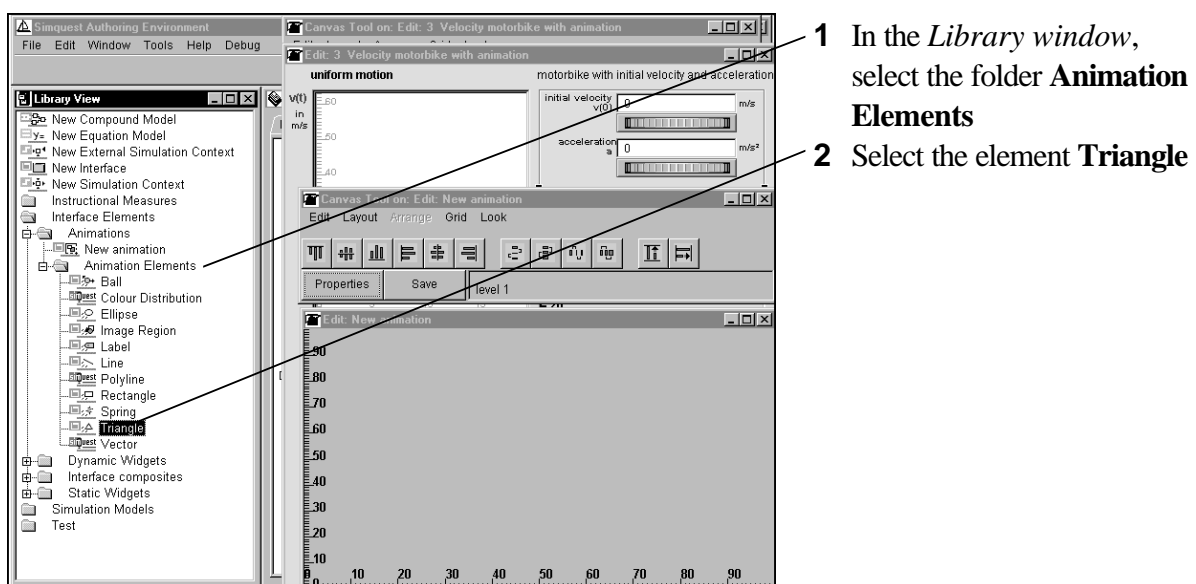
You now have to make the animation editable. This is done the same way as making an interface editable. You do this by selecting the animation element in the interface and opening its editor.

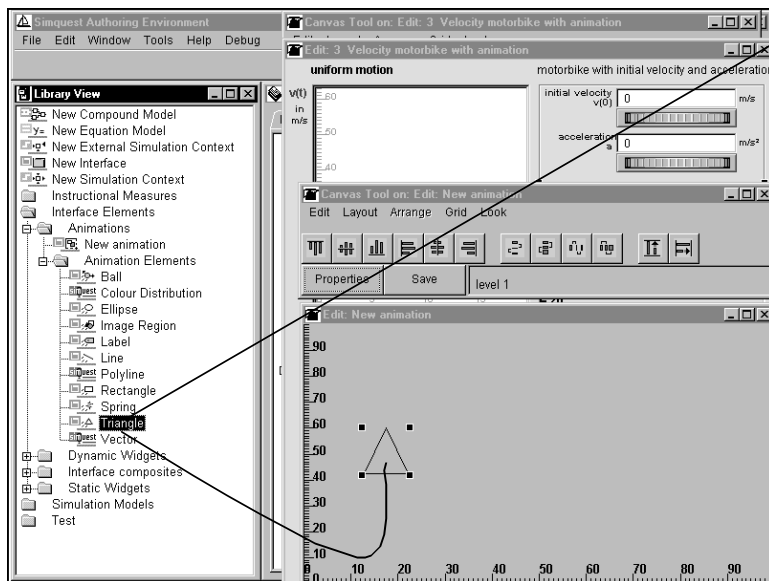


Check if the animation editor appears on the screen.

Adding an animation element

Next, you have to add an animation element to the animation. Animation elements are available in the library window. You can find them in the folder Animation elements. In this case, you are going to add a triangle to the animation.



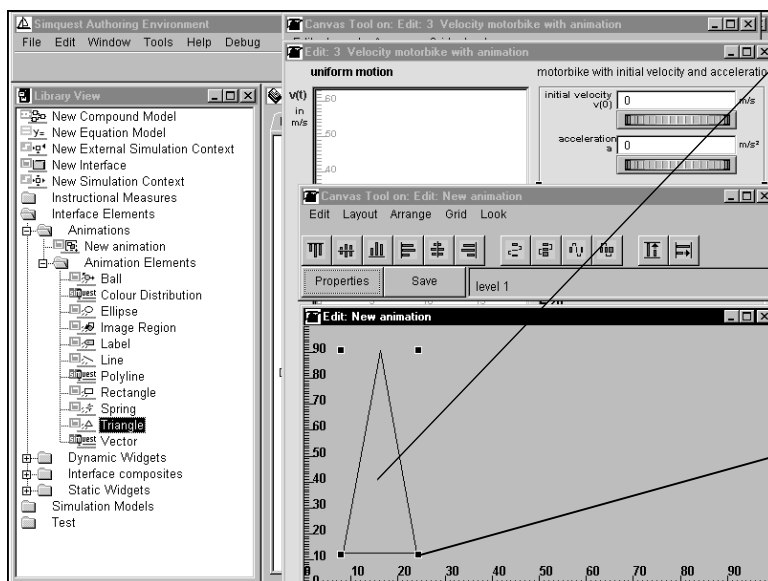


- 3 Drag **Triangle** from the *Library window* and drop it into the *animation*

Check if the triangle appears on the animation.

Moving and resizing an animation element

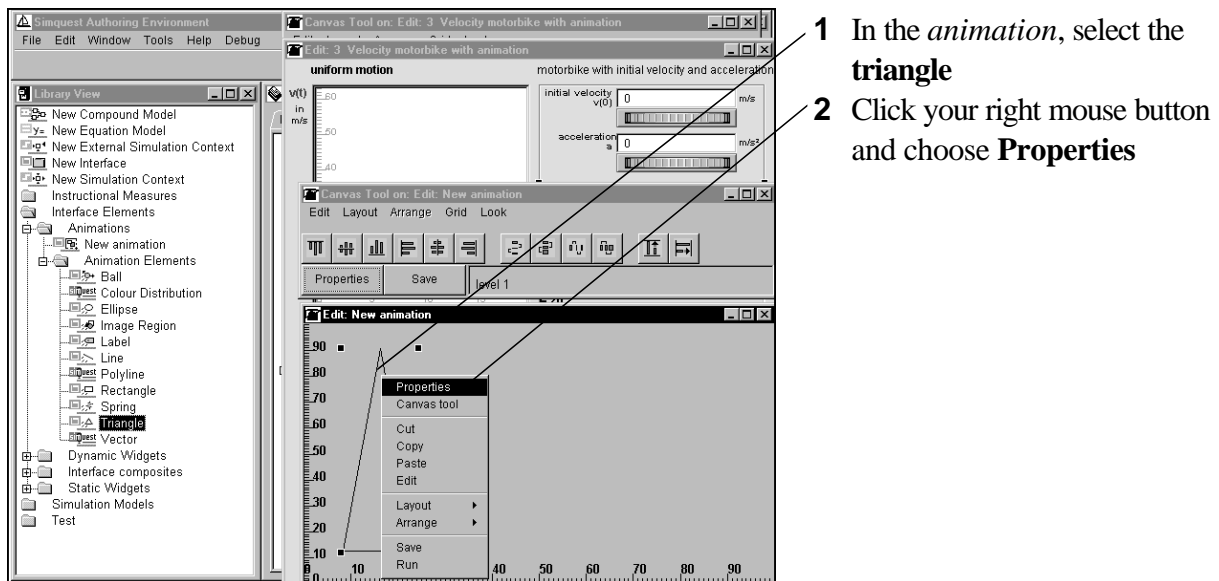
The triangle you just dropped into the animation is probably not on the right place of the animation. It may also have a different size you probably want it to have. You can move the animation and change its size.



- 1 Select the **triangle**.
You can see if an element is selected by the squares in the corners of the element
- 2 To *move* the **triangle**, select it, hold the left mouse button down, drag the element to the appropriate place, and release the left mouse button
- 3 To *resize* the **triangle**, select one of the corners, hold the mouse button down, drag until the appropriate size is reached, and release the mouse button

Opening the properties editor

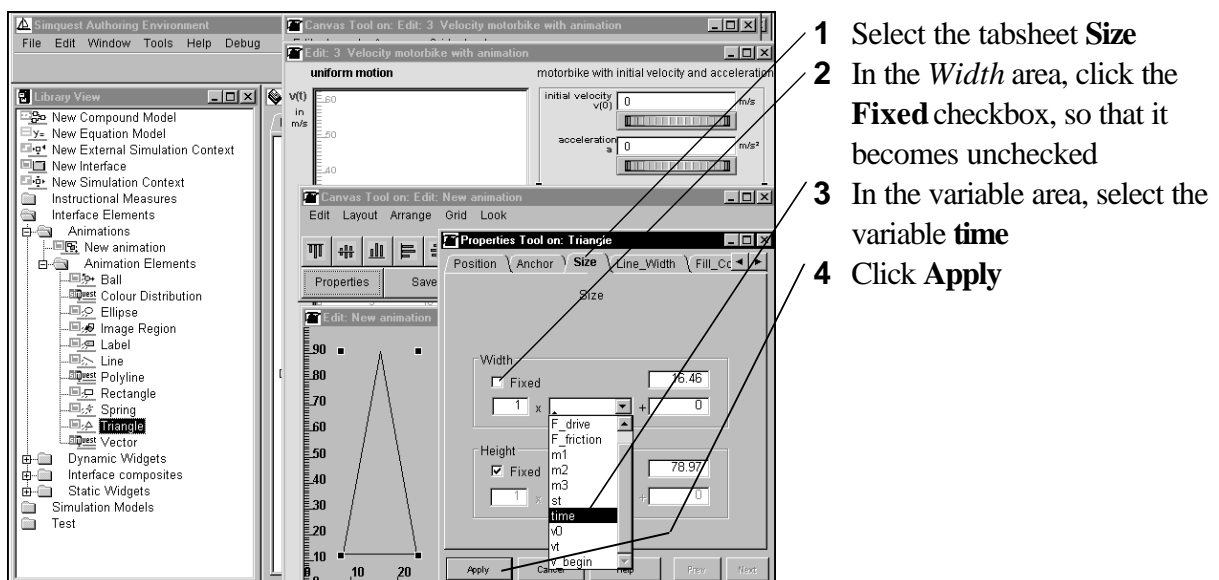
To be able to specify the way the triangle should behave in the animation, you have to open its properties editor. You open this editor using your right mouse button.



Check if properties editor appears on your screen.

Specifying the animation element properties

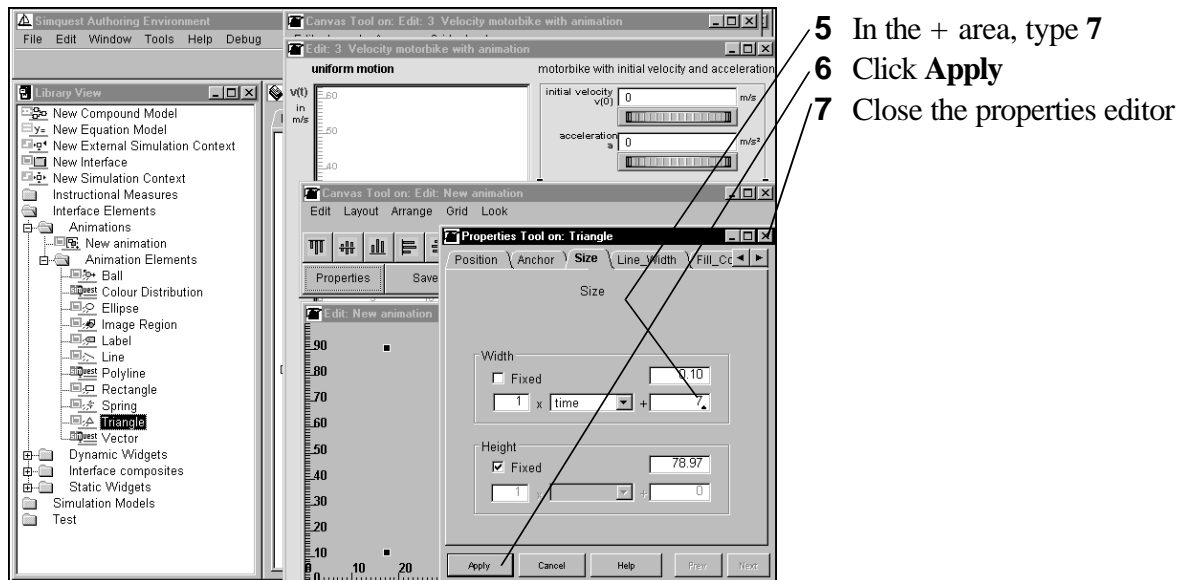
Now you have added the triangle to the animation and opened its properties editor, you have to specify what should happen with it. Among others, you can let its size, colour, and line width change when you link it to a model variable. You have to specify two things: the model variable that should be linked to the triangle, and what should change (size, colour, etcetera). In this case you are going to animate the size of the triangle.



You have now linked the width of the triangle to the variable time. This means that on point of time 0, the width of the triangle will be 0, and on point of time 8, its width will be 8.

This explains why the triangle in your animation editor has disappeared after applying. Namely, the current value for the variable time is 0.

Despite the variable time being 0, you can give the triangle a start size. This can be done by typing a hard value in the formula for the width of the triangle.



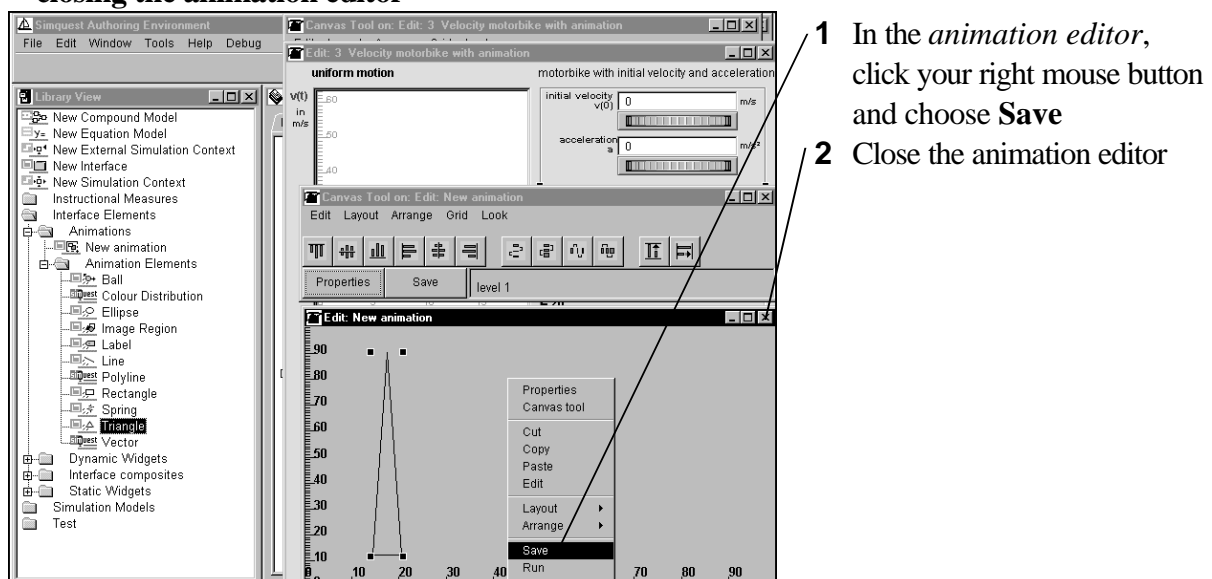
The triangle has reappeared on your animation editor.

Saving and checking your work

You have created an animation in an interface. For this you edited an interface first, and after that, edited an animation. To check if your animation works, you have to save both the animation and the interface.

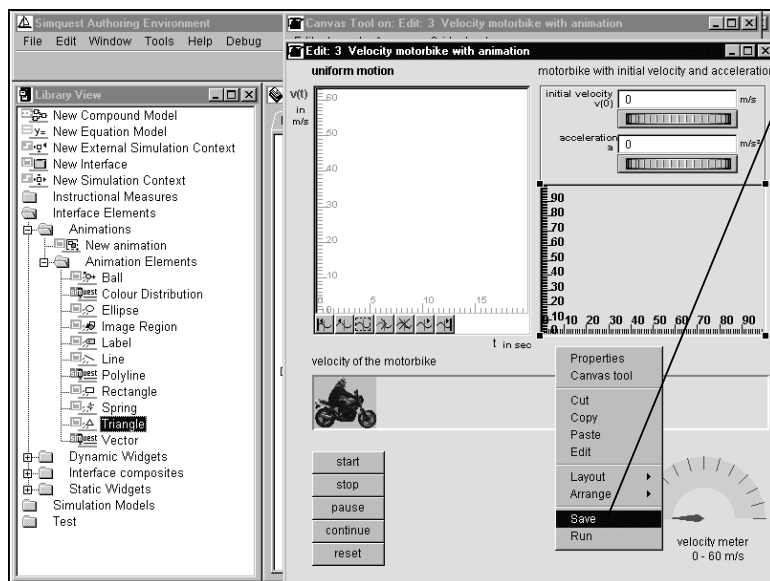
Saving an animation and closing the animation editor

You can save your animation using your right mouse button.



Saving an interface and closing the interface editor

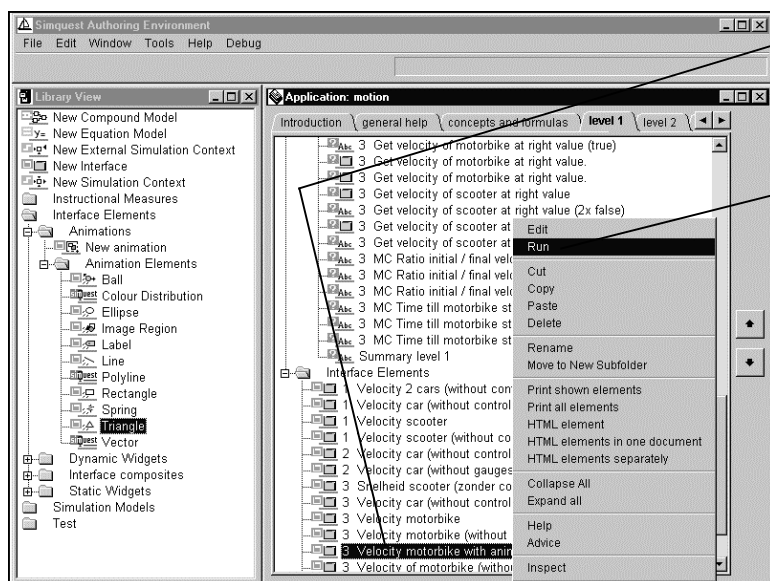
You can save the interface the same way as you saved the animation.



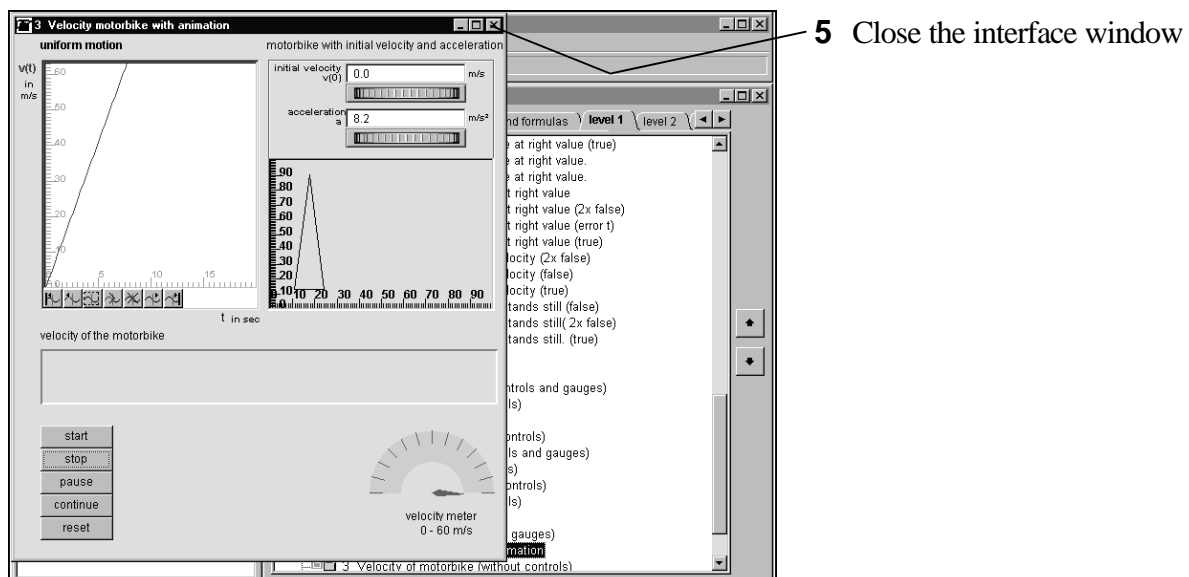
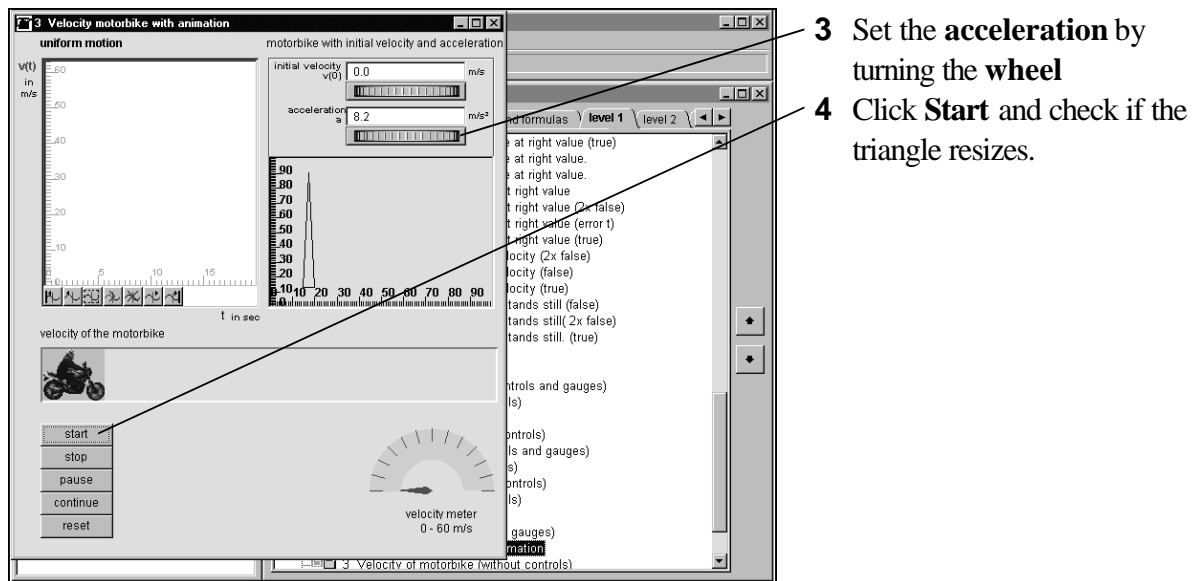
- 1 In the *3 Velocity motorbike with animation* window, click your right mouse button and choose **Save**
- 2 Close the interface window

Checking your work

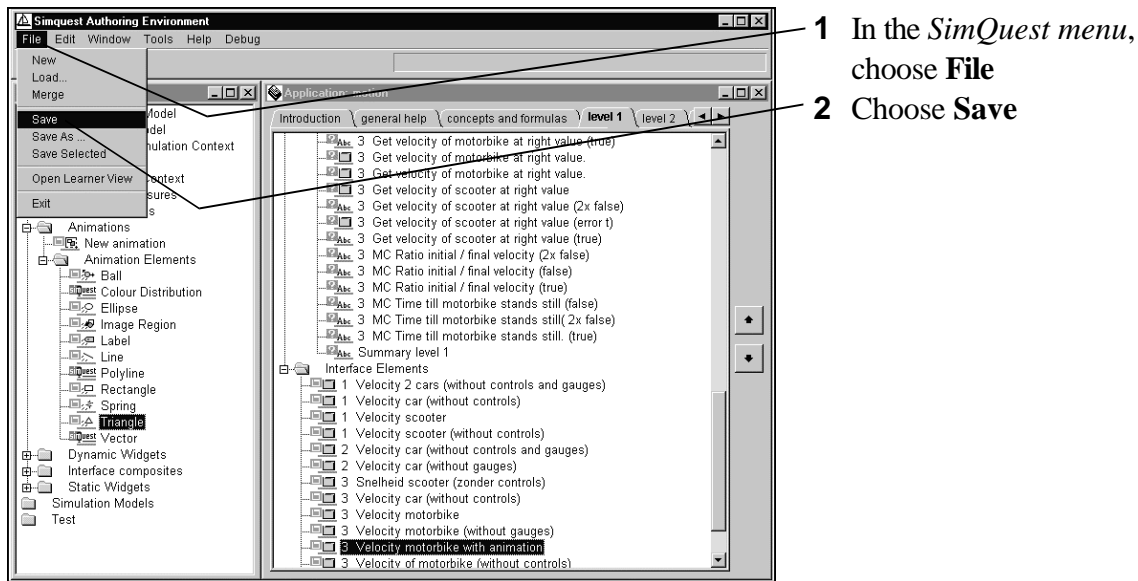
To check if your animated triangle indeed changes its width, you execute the interface in which you have created the animation.



- 1 In *level 1* of the *Application* window, select **3 Velocity motorbike with animation**
- 2 Click your right mouse button and choose **Run**



Saving the application Finally, you can save the application.



Try it yourself You have animated the size, or better the width of the animation. You can also try to animate other characteristics of the triangle. For example: try to animated its place in horizontal or in vertical direction.

Summary In this chapter you have learned how to create an animation. You created an animation by adding the new animation element to an existing interface, opening its editor, and filling it with animation elements. Next you animated the animation element by first determining what part of the element should change and next linking a model variable to it.

3 Animations

Creating <i>animations</i> in an interface	3-1
Editing an interface	3-1
Copying and renaming an interface.....	3-1
Selecting and copying an interface.....	3-1
Renaming an interface.....	3-2
Editing an interface	3-2
Adding and editing an animation.....	3-3
Adding a new animation to the interface	3-3
Moving and resizing an animation element	3-4
Opening an animation editor	3-4
Adding an animation element	3-5
Moving and resizing an animation element	3-6
Opening the properties editor	3-6
Specifying the animation element properties.....	3-7
Saving and checking your work	3-8
Saving an animation and closing the animation editor.....	3-8
Saving an interface and closing the interface editor.....	3-9
Checking your work.....	3-9
Saving the application.....	3-11
Try it yourself.....	3-11
Summary	3-11
