An Introduction to Alice (Short Version) – Extras!

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This is a continuation of the tutorial by Chris Brown in November 2012, utilizing concepts from the original tutorial by Jenna Hayes in June 2009.
This tutorial is a continuation of the short version of the astronaut in the moon. It takes 40 minutes.

Topics that are covered in this tutorial:
- Camera Views
- Moving the Camera
- Using Do Together in the method
- Turning “asSeenBy” another object
- Using Clipboard and Trash Can
- Setting Vehicle to an object
We will be starting out with the finished world of the first tutorial.

Your world should look something like this:
The first thing we’re going to do is create Camera Views!
Camera Views – Introduction

A Camera View is a bookmark location to save the location of your camera. Think of it as an invisible tripod you an place a camera on. This way, if you move your camera around, you can always get back to a certain position by moving to that camera view.
The Camera View - Button

• Click on the green Add Objects Button.
• Look to the right side of your screen, and find a gray button under your object positioning buttons.
• Click on the button labeled more controls.
The Camera View - Button

- More buttons will appear after you click more controls.
- Click on the button that says **drop dummy at camera**. It will seem like nothing happens, but don’t worry, and only click the button **one time**.
The Camera View

• Once you have clicked this button, a folder will appear on your object tree labeled **Dummy Objects**.

• If you click on the plus sign next to the **Dummy Objects** folder, a list of your Camera View positions will appear.

• Right now, there is only one position, called **Dummy**.
The Camera View

• Whenever you add a Camera View position, you should rename it so that you know which position it is.

• Right click on Dummy in the object tree, and then choose rename. Type in Start.

• Now you know that this camera position is the one that you started at! Adding a dummy at your starting camera position is something you should do whenever you start a new Alice world.
The Camera View

• We’re also going to rename the Dummy Objects folder, so it’s easier to recognize.
• Right click on the Dummy Objects folder in the object tree, and choose rename.
• Type in Camera Views
Moving the Camera

• Let’s try moving the camera to get a close up of the astronaut.
• Under your viewing screen, you should see a bunch of blue arrows.
• If you click on the arrows and drag your mouse in different directions, the camera will move in different ways.
• Move your camera until it is close to the astronaut’s face. Use the **Undo** button if you make any mistakes or don’t like the result.
The Camera View

• Let’s drop another Camera View at the camera’s new position, using the same steps as before, and label it Astronaut View.

• What if we want to go back to our Start camera position?

• First, right click on camera in the object tree.
The Camera View

On the menu that pops up, choose methods, then camera set point of view to, then Camera Views, then Start.
The Camera View

• This will set your camera view back to its starting position, where you can see both the astronaut and the humvee.

• Now follow the steps of the previous 3 slides to create a camera position that is a close-up of the humvee. Name it Humvee View.
• Now, right click on camera in the object list and set its view back to Start.

• Then, click Done to go back to the original Alice screen.
Camera View – my first method

• Now, let’s implement our camera views into world.my first method.

• First, let’s have the camera do a close up of the astronaut.

• Click on camera in the object tree, and then go to the cameras methods list. Find set point of view to, and drag and drop it to the top of world.my first method.

• Choose Camera Views, and then Astronaut View.
Camera View – my first method

camera's details

properties
methods
function

camera move away from
camera orient to
camera turn to face
camera point at
camera set point of view to
camera set pose
camera stand up
camera move at speed
camera turn at speed

world.my first method

world.my first method No parameters

No variables

asSeenBy

the entire world
camera
light
ground
humvee
astronaut
Camera Views

Astronaut View
Camera View – my first method

• Now, let’s have the camera do a close up of the hummer.

• Drag another camera set point of view to into world. my first method, and this time, select Dummy Objects, and then Humvee View.

• Repeat the previous steps so that the camera goes to the Start view, after the Astronaut and Humvee Views.
Camera View – my first method

Your code will look like this when you’re done.
Now, let’s create a new method for the astronaut using DoTogether and asSeenBy!
Methods

• Let’s write another method. This method will have the astronaut go up in the air and then float in a circle around the humvee.

• Click on the astronaut in the object tree, and then go to his/her methods tab.

• Click on the create new method button.
Methods

• Name the new method `Float` and then click OK.

• The new `astronaut.Float` method’s tab should appear in the method editor.
Float

• The first step is to make the astronaut move up off the ground.
• Click on astronaut in the object tree, and then find astronaut move in the list of methods.
• Drag and drop it into Float. On the menu that pops up, choose Up, and then 1 meter.
Let’s try testing out what we have so far.

To do this, we need to change the `when the world starts` event again, this time to `astronaut.Float`.

After you do this, press **Play** and watch the astronaut move up off the ground.
• Now let’s have the astronaut say “Wheeeeee!” after he/she rises into the air.

• Find astronaut say in his/her list of methods, and drag it into Float.

• Click other..., and type “Wheeeeee!” into the box that appears. Then click OK.

• Test your method again by pressing Play and watching your world.
• The next thing is to make the astronaut float around the hummer.

• Find astronaut turn in his/her list of methods and drag and drop it into Float below the other lines of code.

• In the drop down menu that appears, select left, and then 1 revolution.
• Test out Float again by playing the world.

• It seems that the astronaut turns in place instead of turning around the humvee!

• How do we fix this? We must use something called asSeenBy.

• On the line of code that says astronaut turn left in your Float method, click on the small down arrow next to the word more....
Float

- On the drop down menu that appears, select `asSeenBy`.
- When `asSeenBy` is used with the `turn` method, it makes the object turn around another object, instead of just turning in place.
- Since you want the astronaut to turn around the humvee, select `humvee`, and then the entire humvee.
- Try playing your world to see the results.
Float

• Now let’s make the astronaut say “Wheeee!” at the same time that he/she floats around the humvee.

• To do this, we will need to use Do together, which is a control that tells more than one method to happen at once.
• Find the **Do together** button at the bottom of your method editor and drag and drop it into **Float**.

• Then, click on the left-most part of the astronaut say Wheeee! line and drag and drop it into the **Do together**. Do the same thing to the astronaut turn left line. Your code will look like this:
Float

• Try pressing Play to see the results. The astronaut should say “Wheeee!” at the same time that he/she starts to turn around the humvee.
Float

• Now let’s add one last thing to our Float method. We need the astronaut to go back down to the ground at the end of the method.
• Find move in the astronaut’s list of methods, and drag and drop it into Float at the very end. Select down, and then 1 meter.
• Your final code will look like this. Test it out for the full effect!
Now, we’re going to make a new method using Clipboard and Trash Can!
rideHumvee

• We’ve already written the code for the astronaut to ride the humvee in world.myfirstmethod
rideHumvee

• We’re going to use this code in to create a new method for the astronaut: rideHumvee.
• Try to create a new astronaut method called rideHumvee on your own! If you can’t remember, look back at the slides creating the astronaut float method.
• When you’re done, the rideHumvee method should be empty.
Now, go back to the world.my first method. Drag the line telling the humvee roll left to the Clipboard on the upper right corner of the screen.
rideHumvee – Using Clipboard

• Go back to the rideHumvee method.
• Drag the Clipboard to the method.
rideHumvee – Using Clipboard

• When you use Clipboard again, just drag the new code on the Clipboard button. It automatically replaces the old content.

• Repeat the last two slides for the rest of the code of rideHumvee:
  – Astronaut move to humvee
  – Astronaut set vehicle to humvee
  – Astronaut say “Use the arrow keys to drive me around!”
rideHumvee

• Your rideHumvee method will look like this:
rideHumvee – Using Trash Can

• We now have a rideHumvee method, but the same code is still in world.my first method!
• We need to delete all of the code that we copied into the rideHumvee method. There are two ways to do this:
  – Right click on each line of code, and click delete
  – Drag the line of code to the Trash Can
rideHumvee – Using Trash Can

To use the Trash Can, drag the line of code you want to delete into the Trash Can button at the top of the screen.
rideHumvee

- Drag in the **rideHumvee method** into your **world.my first method**. It will look like this. Try the playing the code! It should work exactly the same way.

![Image of world.my first method with no parameters and no variables]

- astronaut → move up 1 meter
- astronaut → resize 2
- astronaut → turn right 2 revolutions
- astronaut → resize 0.5
- astronaut → move down 1 meter
- astronaut.wave
- astronaut.rideHumvee
Add in astronaut.float

• Now, add in the astronaut.float method into world.my first method before the astronaut wave
Fixing it up

• There is still one problem with our world. You may have noticed that when you steer the humvee, it will often drive off the screen!

• Let’s add a line of code that sets the camera as a vehicle to the humvee, so that the camera follows the humvee around!
Fixing it up

• Click on **camera** in the object tree, and then click on the camera’s **properties** tab.

• Click on the **vehicle** button and drag and drop it into **world.my first method**.

• On the menu that pops up, select **humvee**, and then the entire **humvee**.
Fixing it up

Your final code for `world.my first method` should look like this:

Press **Play** again to test out your world. Try driving the humvee with the new camera setting.
Notes for later

• If you later want to unglue the astronaut from the humvee, set the *vehicle* property of the astronaut from humvee back to *world*.

• If you later want to un-glue the camera from the humvee, also set its *vehicle* property back to *world*. 
Congratulations! There are many more things that you can do with Alice, so keep exploring it!