Changing Camera Views!
Part 1: Set Point of View to

By Bella Onwumbiko
under the direction of Professor Susan Rodger
Duke University
July 2013
Updates made June 2014 by Yossra Hamid

Introduction!
In this tutorial, we will set up four camera views that will focus on the main character in our Alice world. As she walks, we will change the camera’s point of view in order to see different sides/angles of the character.

You will become more comfortable:
• Dropping dummy cameras to create interesting views
• Using the camera’s vehicle property
• Using the camera’s set point of view to method
• Using a walking character

Section 1a: Setting up the World
Create a new world → snow template. Save it! After you have saved the file go into the "Layout" mode by clicking on the green button Add Objects.

1) Click more controls → drop a dummy at camera.

2) In the object tree, right click on 'Dummy Objects'. Rename the folder to 'cameraViews'.

3) Open the new cameraViews folder. Right click on ‘dummy’ & Rename the dummy to ‘originalView’.

Section 1b: Adding Objects
In the gallery below, click on the People folder.

Add Rockette to your world! If you look at Rockette’s methods tab, you should see that she already knows how to walk! We will use this later!

Place the Rockette in the world so it looks like this!

Update: Rockette is not available in the newer versions of Alice. Instead, use the AliceLiddell object.
Section 1b: Adding Objects (cont..)

Click on Local Gallery. Open the Roads and Signs folder. Add a Road to the world.
Right click on Road in the object tree. Resize the Road to be 3 times bigger:
Methods → Resize → other → 3

Once you resize the Road, use the buttons in the upper right-hand corner to position the scene like this.

Section 1b: Adding Objects (cont..)

Click on Local Gallery. Open the Buildings folder.
Add an Igloo to the world.

Use the buttons in the upper right-hand corner to position the scene like this.

Section 1b: Adding Objects (cont..)

Click on Local Gallery. Open the Holidays folder. Open the Christmas folder.
Add a ChristmasTree to the world.
Use the buttons in the upper right-hand corner to position the scene like this.

Update: The ChristmasTree object no longer exists in newer versions of Alice. Instead, open the Nature folder, and add PineTree object.

Section 1c: Adding Dummy Cameras

We want to drop 3 additional dummy cameras around the Rockette:
1) rightSideView
2) frontView
3) leftSideView

Method 1: Using the camera buttons
- You will need to use the middle set of buttons for most of the camera movement.
- The leftmost set of buttons will also be useful.
- You will not need to use the rightmost set of buttons.

Method 2: Using Alice built-in methods (Right click on camera in object tree)
1) camera set point of view to rockette
2) camera move (right, forward, or left)
3) camera turn to face rockette
4) camera move up ½ meter

Screen shots of the camera views that you need to have are on the next slide.

Once you get the camera in the proper position, drop a dummy camera, and rename it appropriately & repeat for the other views.
Section 1c: Adding Dummy Cameras (cont...)

originalView
rightSideView
You should now have these 4 camera views setup!

frontView
leftSideView
Click DONE when you are finished.

Section 2: Writing the Code!

At the same time that the Rockette is walking down the road, we want to change the camera’s point of view to the leftSideView, frontView, rightSideView, and then Rockette’s point of view, a default camera view.

DO TOGETHER
rockette walk

DO IN ORDER
camera set POV to leftSideView
camera set POV to frontView
camera set POV to rightSideView
camera set POV to rockette.head

I’ll show you exactly how to write this code in the next few slides!

Section 2: Writing the Code! (cont...)

In world.my first method, Drag in a Do together and then drag in a Do in order inside of the Do together.

Next, we will make the rockette walk! Click on rockette in the object tree. Drag and drop the walk method into the Do togther, and above the Do in order. Select for the rockette to move 20 meters.

Play the world to see what happens!

Section 2: Writing the Code! (cont...)

The rockette moves really fast because she needs to cover 20 meters in one second! To fix this, we will make a loop that runs 20 times. Each time the loop runs, the rockette will walk 1 meter, in 1 second. Try this:

Make sure you change the distance that rockette walks to be 1 meter!

Play the world to see what happens now!
Alright! Now that we have the rockete walking, we can worry about how to move the camera around her as she walks!

Click on camera in the object tree. Go to the methods tab, and click and drag camera set point of view to originalView. Place this in the Do in order.

Change the duration to 3 seconds!

Oh no! The rockete walked right out of the camera’s view! We need to figure out how to make the camera follow the rockete, no matter where she goes!

We will use the vehicle property! We must set the vehicle for each of the camera views to be the rockete. This will “glue” the camera to the rockete.

Click on camera in the object tree. Click on the properties tab. Change the vehicle to be the entire rockete.

Change the vehicle for each of the camera views (originalView, rightSideView, frontView, leftSideView) by clicking on each, one at a time, in the object tree. Select the properties tab. Change Vehicle to the entire rockete.

Do the same thing for the other views in the cameraViews folder that you created earlier!

Click on camera in the object tree. Go to the methods tab, and click and drag camera set point of view to:
1. rightSideView
2. frontView
3. leftSideView

Place these in the Do in order.

Change the duration to 3 seconds!

Play the world to see what happens now!

Let’s add one more camera view! This one will be from the point of view of the rockete.

Click on camera in the object tree, go to the methods tab, and drag set point of view to Rockete → hips → stomach → torso → collar → head → entire head

so that it is the last thing in the Do in order command.

Play the world now to see what happens!
The last thing we will do is turn the `rockete left ½ revolution:
Click on `rockete in the object tree.
Drag `turn to the bottom of the method editor, outside of the do together.
Change the `duration to 2 seconds.

NOTE:
We set up a camera view for the original scene view called “originalView,” but we later moved it with our character. However, if you would easily like to go back to that original scene in your animation, here is a simple solution:
- Set the camera’s POV to `originalView, in place
- Drop a dummy camera & rename it `backView
- Set the vehicle of `backView to the `rockete
- Set the vehicle of the `originalView to `world
Now you can move the `backView with the `rockete, instead of the `originalView.
You will essentially replace `originalView with a dummy object called `backView in the Do in order.
You up for a challenge?!

1) Add more dummy cameras (new camera views)
2) Check out what happens when you tell the camera to turn 1 revolution around rockette (try using “as seen by”!)
3) What happens next? Add more characters to create a more interesting scene

Want to learn how to make a simple scene change?
Check out Part 2 of this tutorial!