Creating Repeatable Story Branches

You now know almost everything about ScriptEase II's story system. However, you may want to create a repeatable quest in the game. Or you could use the story system to repeat a character's actions a few times. In this tutorial, we will use the continue system to make a character walk around the park using a series of waypoints that already exist in the scene.

Getting Ready to Walk:

1. First back up your *.ses file.

2. We will get the Rebecca character to walk some waypoints using causes and effects we have used before. Open the Start story point.

3. Add a "When subject is created" cause. Drag Rebecca into the subject slot.

4. You can delete the default description and question in this cause since Rebecca is only created once. We could actually go back and do the same for the "When Player is created" cause that is also in the Start story point.

> *Tip:* If we had many "When object is created" causes that all check if Start is active, and one of them succeeds start, all of their effects may not occur. This is because the order that these Causes occur in is not guaranteed. We also can't put them in separate Story Points since the cause only occurs at the start of the game! So it's best and easiest to remove the story description and cause.

5. Drag in a "Play walk animation for Character at speed #" effect. Drag Rebecca into the Character slot and change the speed to 2. After this tutorial, you should experiment with this number to make the speed match up with her walking animation.

6. Add an "Object reaches its target when it is # units away from the target" effect. You can drag the Rebecca object from the previous effect into this Object slot to copy it over. Change the number to 2. A target is usually not reached until the Object is right above it. That looks strange when the character should continue onto the next target. Setting this number to two makes the characters reach their targets when they are a bit away from its center.

7. Now add an "Object walks a path to Target" effect. Again, drag Rebecca into the Object slot. Then find the wp1 object under Waypoints in the Game Object pane. Drag it into the Target slot. Your finished cause should look like Figure 1.

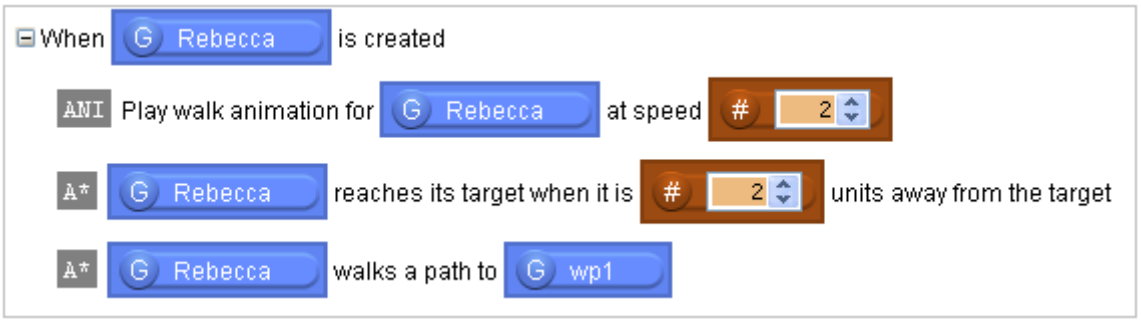

Figure 1: The finished cause in the Start story point.

8. Save your story and test it out. To find out who Rebecca is, it might be helpful to double-click her GameObject in the Hierarchy in Unity to see where she is before starting the game. Rebecca will walk to the first waypoint. However, you will notice that she either circles it or continues walking in place, which is not what we want her to do.

Walking Waypoints:

9. We need to make a story point for each waypoint Rebecca walks to. Our story points will represent her reaching the waypoint. Thus, our first story point will be called “Rebecca at Waypoint 1”. Add a story point with this name after Start.

10. Add another story point after this one and name it “Rebecca at Waypoint 2”. Do this three more times until you have “Rebecca at Waypoint 5”. The start of your graph should look similar to Figure 2. Your Story Points may end up below the Get Ducklings instead of above, but the vertical order of story points doesn’t matter.

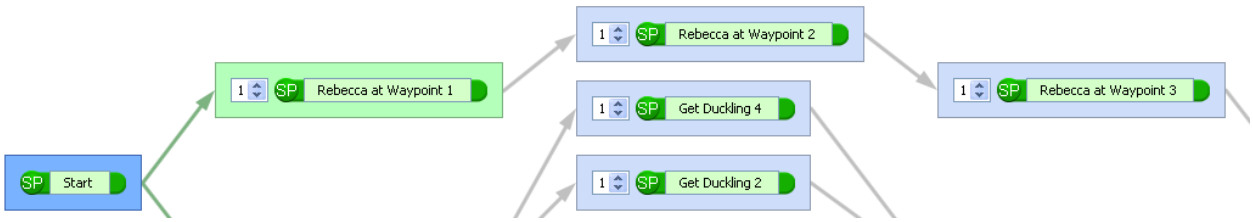

Figure 2: The partial graph of the story points.

11. Click on the Rebecca at Waypoint 1 story point to open it.

12. Add a “When subject reaches its Target” cause. Note that this is also from the optional A* library we added earlier. This cause happens whenever the subject reaches any of its Targets, so we are going to have to check which target we have reached. Drag Rebecca to the subject slot.

13. There is currently a bug where the “Is Active describes if current story point is active” description and its question are not added to optional libraries. We will add them later, but first we are going to add a different description.

14. Find the “Objects Equal describes if Object 1 and Object 2 are equal” description and drag it into the cause. Rename “Objects Equal” to “Waypoint Reached”. Drag the Target object from the cause into one of the slots, and wp1 from the Game Object pane into the other slot.

15. Add a question into the Cause and drag the Waypoints Reached object into its slot.

16. We are now checking whether the reached waypoint is wp1. However, we should also check which part of the story we are in. Find the “Is Active describes if Story Point is active” description and drag it into the Yes part of the question.

17. You will notice that this is the same description that is usually in Causes by default. We need to drag the Rebecca at Waypoint 1 story point object into its slot from the Story Graph.

18. We also need another question. Drag one in just below the Is Active description. Then drag the Is Active object into the question’s slot. Nesting questions like this is how you can check the result of multiple questions before an effect occurs. In this case, not only does the target need to be wp1 before effects occur, but the “Rebecca at Waypoint 1” story point needs to be active.

19. Add an “Object walks a path to Target” effect to the Yes part of the Is Active question.

20. Drag Rebecca into the Object slot and then wp2 into the Target slot.

21. Add a Succeed Story Point effect to succeed the story point and match Figure 3.

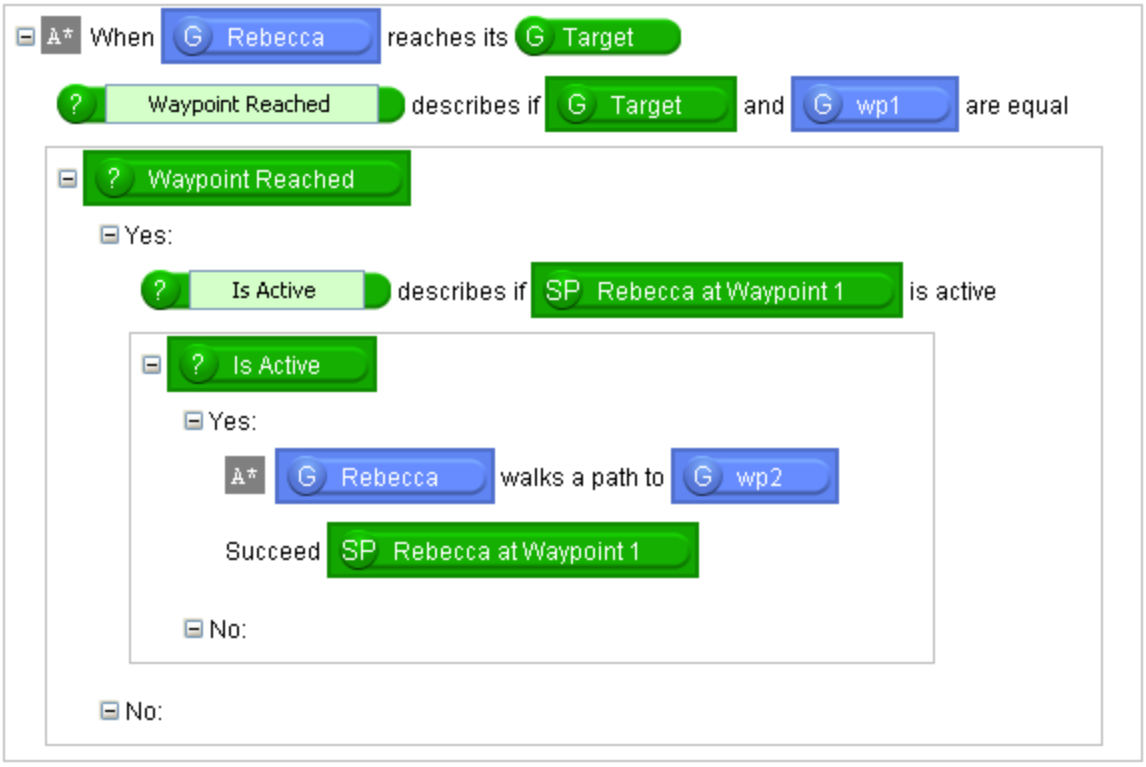

Figure 3: A cause that will get Rebecca to walk to her next waypoint.

22. Save your story and test it out. Rebecca should now walk to the next waypoint.

23. We want Rebecca to keep walking her waypoints all the way until wp5. To make her do so, click on the Cause in the Rebecca at Waypoint 1 story point and copy it using the Edit menu or Ctrl+C. The entire Cause should be highlighted before copying.

24. Paste the Cause into the next story point, Rebecca at Waypoint 2, by first selecting the Story Point, then clicking anywhere in the Story Point pane. Then either paste using the Edit menu, or by pressing Ctrl+V.

25. We need to change a few objects currently in slots. Wp1 in the Waypoint Reached description needs to be wp2 and the target of the "Rebecca walks a path to Target" effect needs to be wp3 since we want Rebecca to walk to her next waypoint.

26. The references to the "Rebecca at Waypoint 1" story point also need to be changed. You can change both at once by holding the Shift key while dragging the "Rebecca at Waypoint 2" story point object into the Is Active description's slot. Check the "Succeed Story Point" effect to make sure its object also changed.

27. Repeat these steps for the story points Rebecca at Waypoint 2, 3, and 4, but don't change 5 yet.

28. Now select Rebecca at Waypoint 5. Paste the Cause from “Rebecca at Waypoint 2” into “Rebecca at Waypoint 5”. Change wp2 to wp5 in the “Waypoint Reached” description. Also change the Is Active description’s story point to “Rebecca at Waypoint 5”.

29. Now, instead of walking a path to wp6, we will walk a path back to wp2 so drag the wp2 object to where the wp3 object is now. Wp2 through wp5 form a square part of the Park’s pathways that Rebecca can walk around in. Walking back to wp1 would make her walk through the grass.

30. We also don’t need to succeed this story point. Instead, we want to use an effect called “Continue at Story Point”. Find this effect and drag it in after the “Rebecca walks a path to wp2” effect. Delete the “Succeed Story Point” effect that was in there before.

31. Drag the “Rebecca at Waypoint 2” story point into the new effect’s slot. This effect will make “Rebecca at Waypoint 2” active, and every story point after “Rebecca at Waypoint 2” inactive, regardless of their current state. So all of the story points we previously succeeded will become inactive again. This means that when we finish this cause, it will be as if we had just reached “Rebecca at Waypoint 2”. See Figure 4 for the final cause.

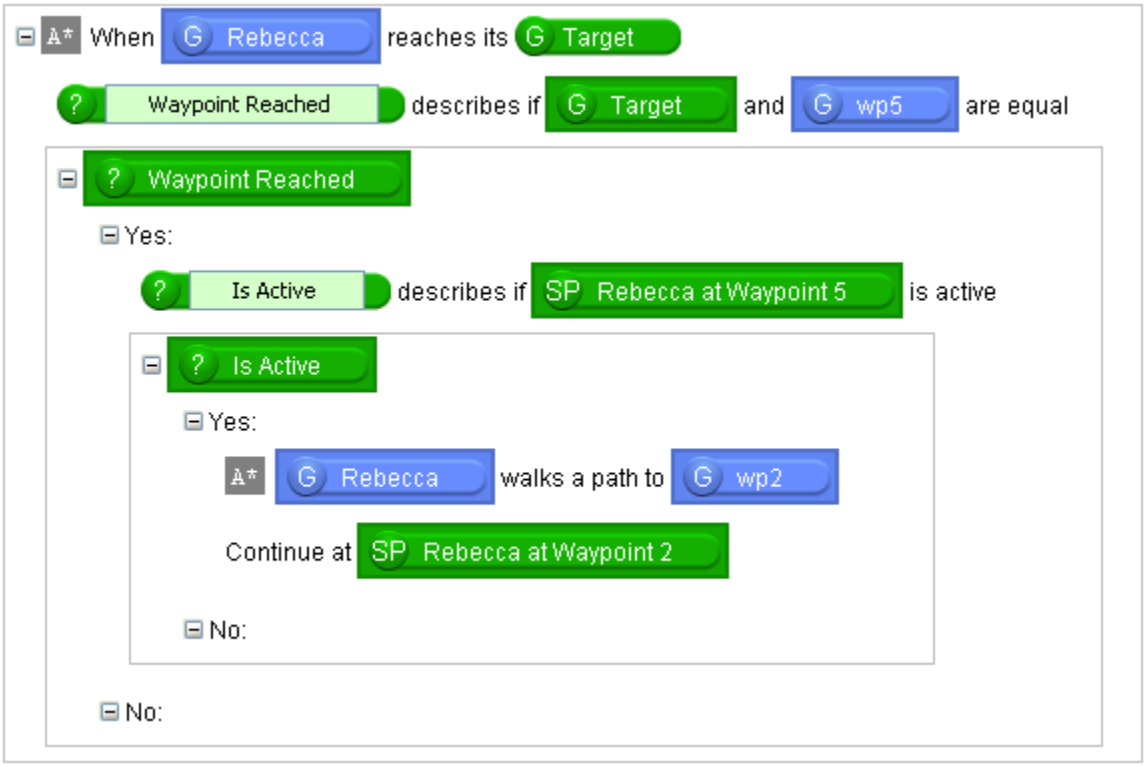

Figure 4: The last cause, which uses a Continue at Story Point effect.

32. Save the story and play it again. Notice that after Rebecca walks the waypoints, she’ll continue to loop from 2 through 5. Also try clicking on the mother duck. Because the two story lines are independent, they can be run simultaneously without regard of the state of the other one.

You now know all of the features of the story graph and story system! The story system can be used for any game, even ones that do not have a set story. For example, a space shooter could have story points for the main menu, the game itself, the final boss fight, and then the credits. Then it could use a Continue to get back to the main menu.

The next tutorial will cover something completely different: building character conversations in ScriptEase II, and then making them appear in Unity.