AIWheeledVehicle: Variable Speed

Exercise Files

Starter – "Kit/gpgt/server/scripts/gpgt/chapter7/exercise105.cs"
Answers – "Kit/gpgt/server/scripts/gpgt/chapter7/answers/exercise105_f.cs"

Exercise Mission

Chapter 7: "105 AIWheeledVehicle: Variable speed"

Synopsis

In this exercise, we will learn how to modify the wheeled bot's speed over time.

Prerequisites

1. *ch1_001.pdf "Using The Kit"*
2. *ch1_006.pdf "Variable Speed #1"*

Exercises

AIWheeledVehicle: Variable Speed

1 Changing Speed Over Time

Goal: Make sure you understand the concept of setting a wheeled bot's speed and the fact that we do this whenever we wish and as often as we wish.

Starter Code: You are provided with a partially defined method (onReachDestination). This callback already has most of the code needed to cause the wheeled bot to drive in a circle. We merely need to add the speed selection code.

```
function variableSpeedPathFollower::onReachDestination( %DB , %theBot )
{
   %pathNode = %theBot.myPath.getObject( %theBot.currentPathNodeNum );
   %pathNode.visibleMarker.setSkinName("red");
   %theBot.currentPathNodeNum = getRandom( 0 , 7 );

   // 1
   // ?????

   %pathNode = %theBot.myPath.getObject( %theBot.currentPathNodeNum );
   %theBot.setMoveDestination( %pathNode.getTransform() , false );
   %pathNode.visibleMarker.setSkinName("green");
}
```

Steps:

1. Randomly select a speed in the range 10% to 100% of the wheeled bot's maximum, and tell the wheeled bot to move at that speed.

Output Goal:

If you run the mission after editing this code, the AIWheeledVehicle will drive around the path, in a circle, slowing and speeding up (randomly) as it crosses every node in the path.

Questions:

1. What would happen (using this code) if we chose a rate of 0%?

2 Bonus

See if you can create a stop and resume behavior like we did in exercise 104, except this time, don't use the stop() method.

There is no answer for this bonus problem in the exercise key, but if you get this right, your wheeled bot will drive around the circle, stopping, starting, ..., et cetera, just like exercise 104 (forgetting the fact that the wheeled bot navigated randomly in exercise 104).

