

Events

So far we have just written descriptions on places and transitions, such as “Robot is moving to location” and “Robot was far away.” Events are what make things actually move and do work.

There are 2 types of events

- **Output events**: Are put on **places** and contain requests/commands which are sent to robots or the operator.
- **Input events**: Are put on **transitions** and contain information which was sent by a robot or the operator.

Output events: Are put on places and contain requests/commands which are sent to team members, such as robots or the operator.

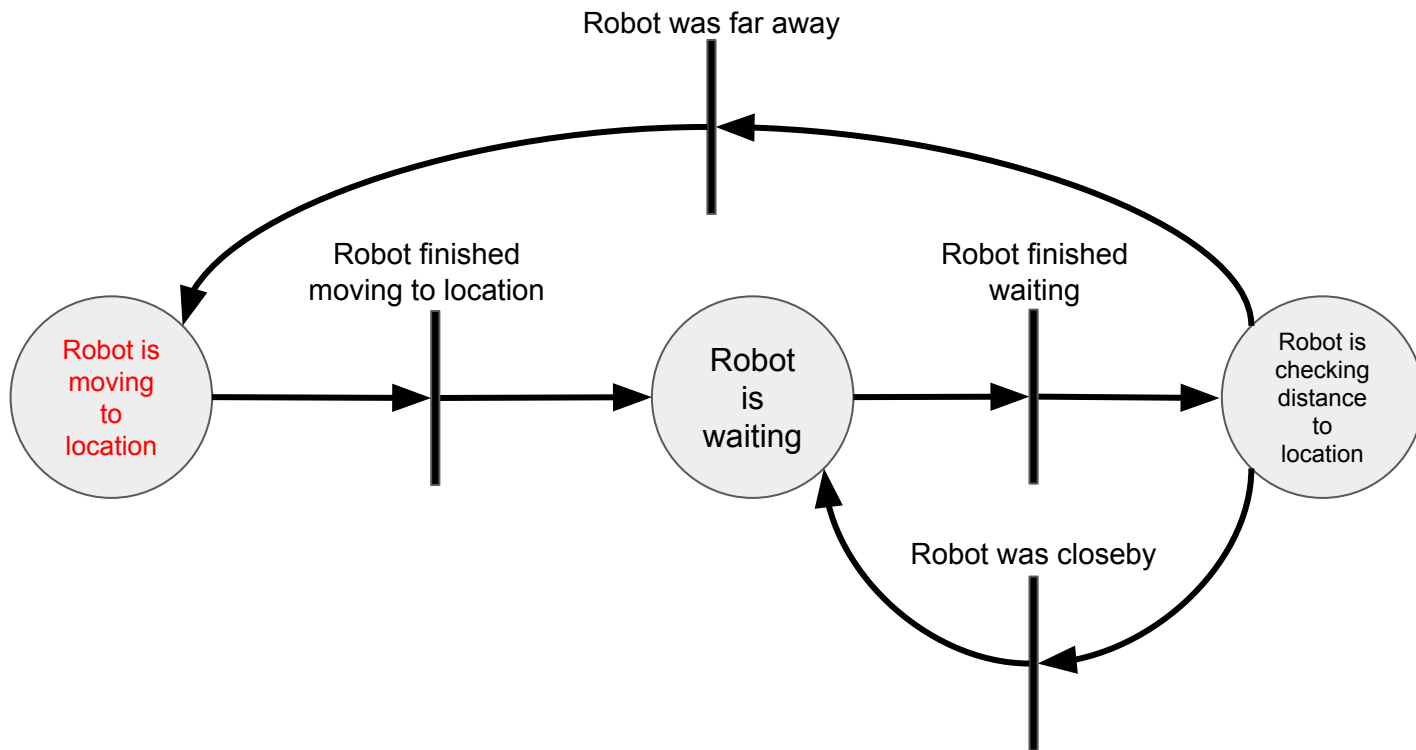
Below are some example output events. We put a right-facing arrow at the beginning of its name to indicate it is an output event.

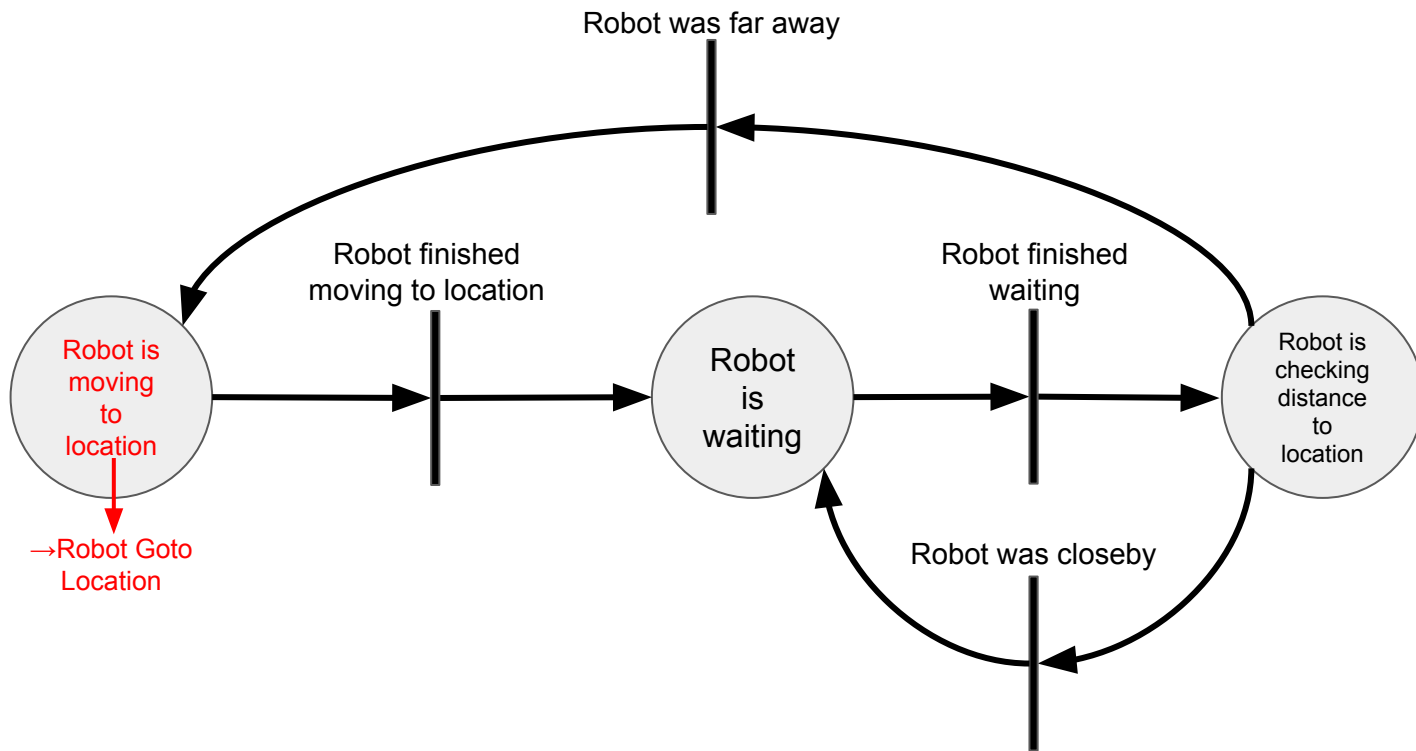
→Robot Goto Location: commands the robot to go to a specified location

→Robot Start Timer: commands the robot to wait for a specified amount of time

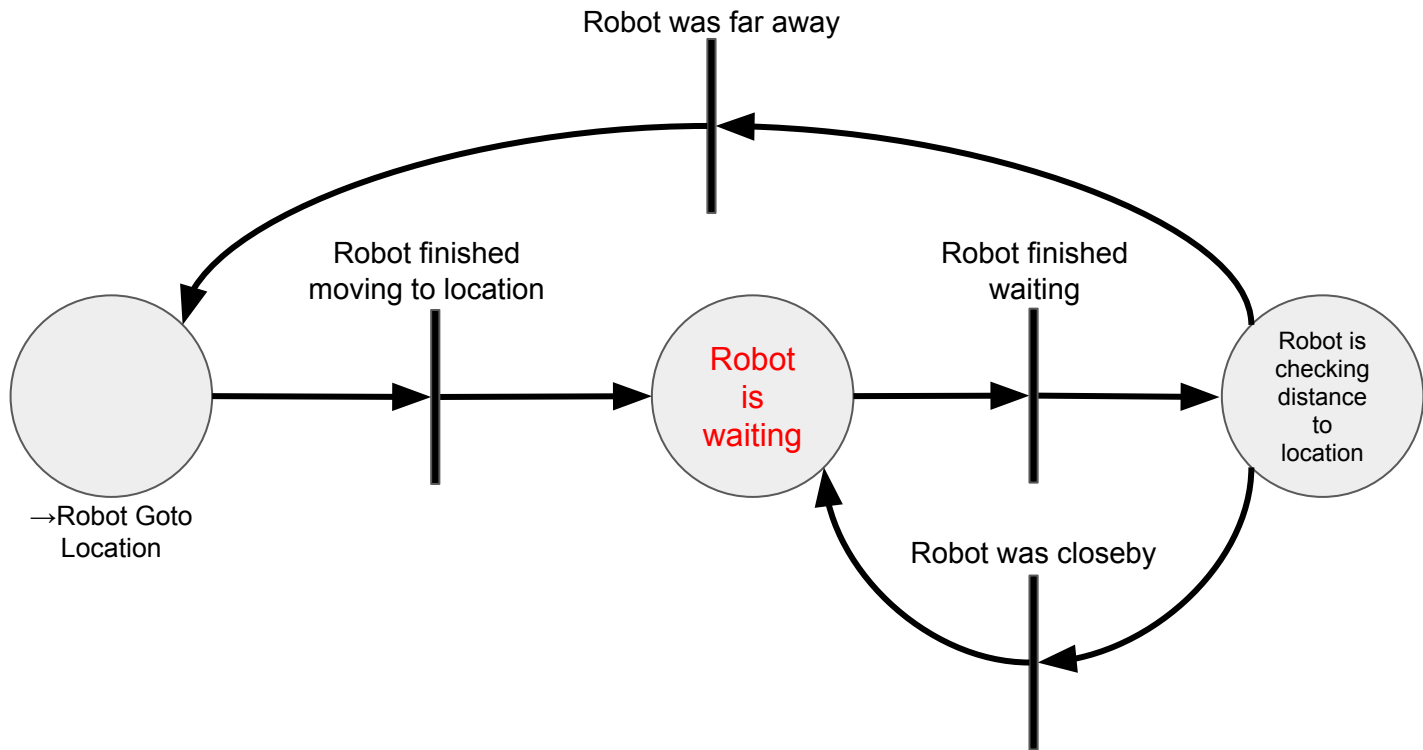
→Robot Compare Distance: commands the robot to compare its distance from a location to a specified distance

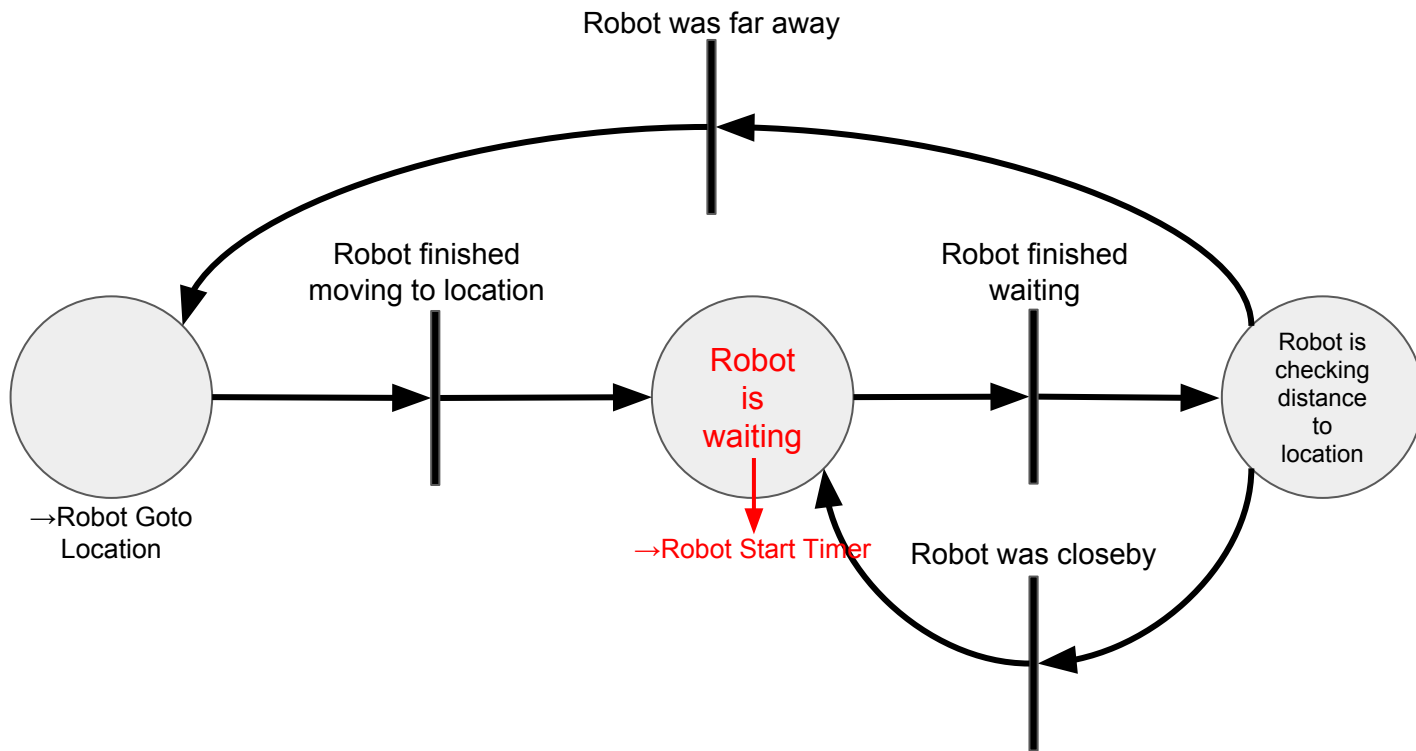
Now we will go through our station keep example and replace the description labels on places with the output events that will actually make those things happen.



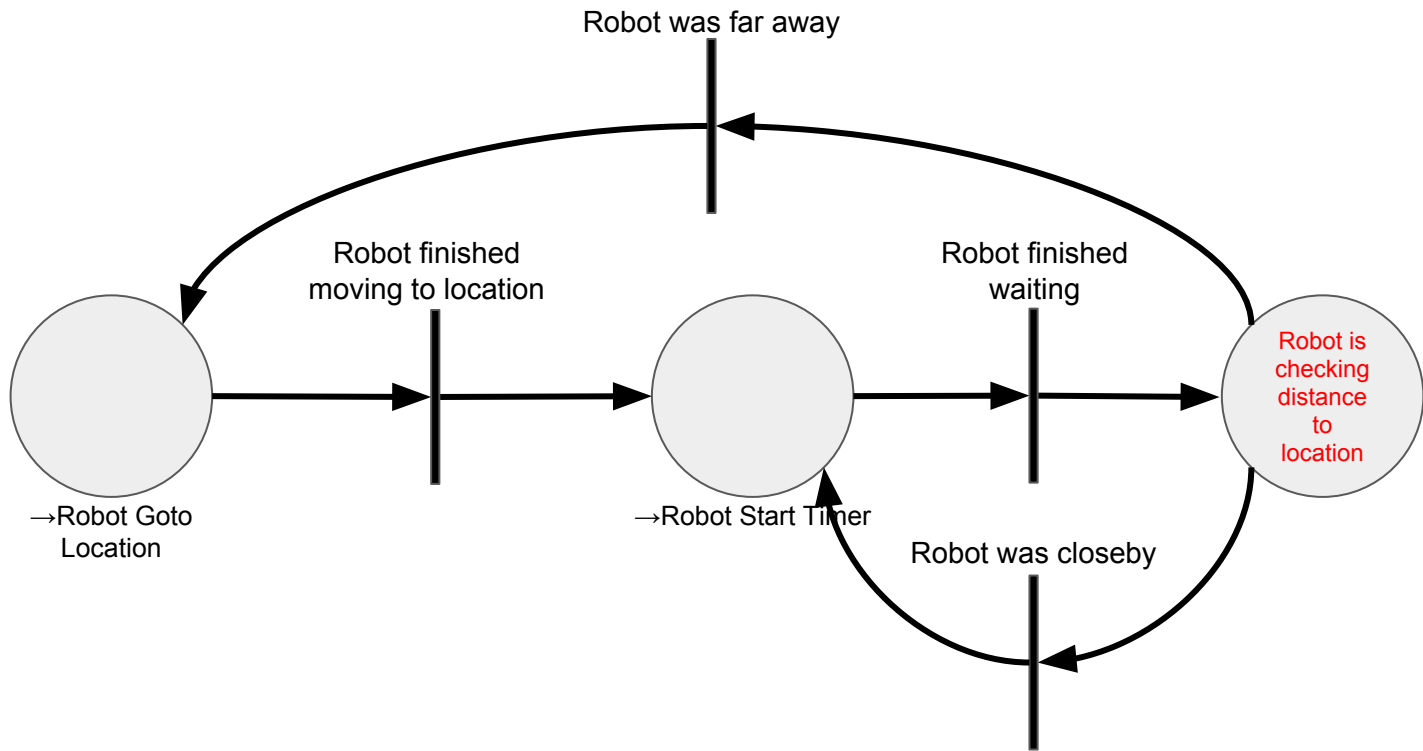


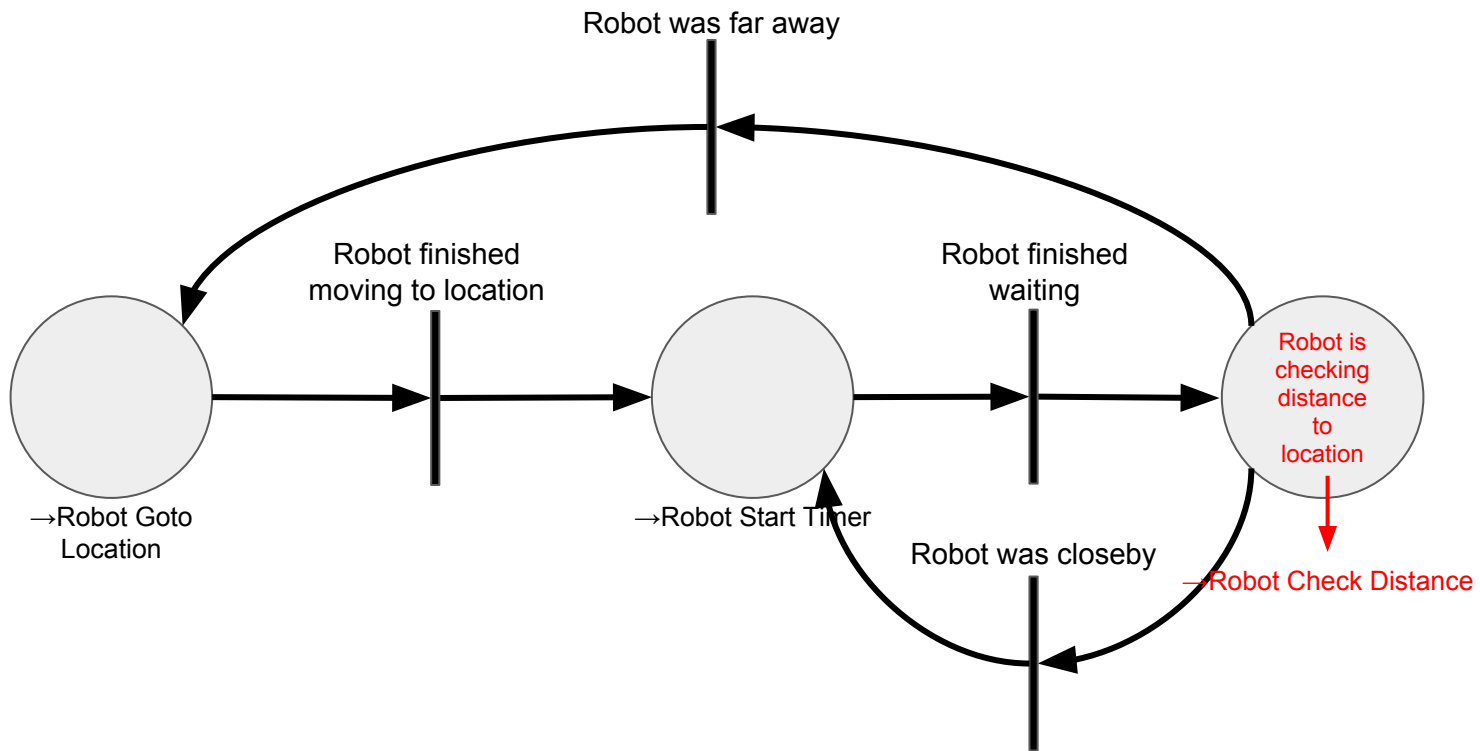
→RobotGotoLocation: commands the robot to go to a specified location



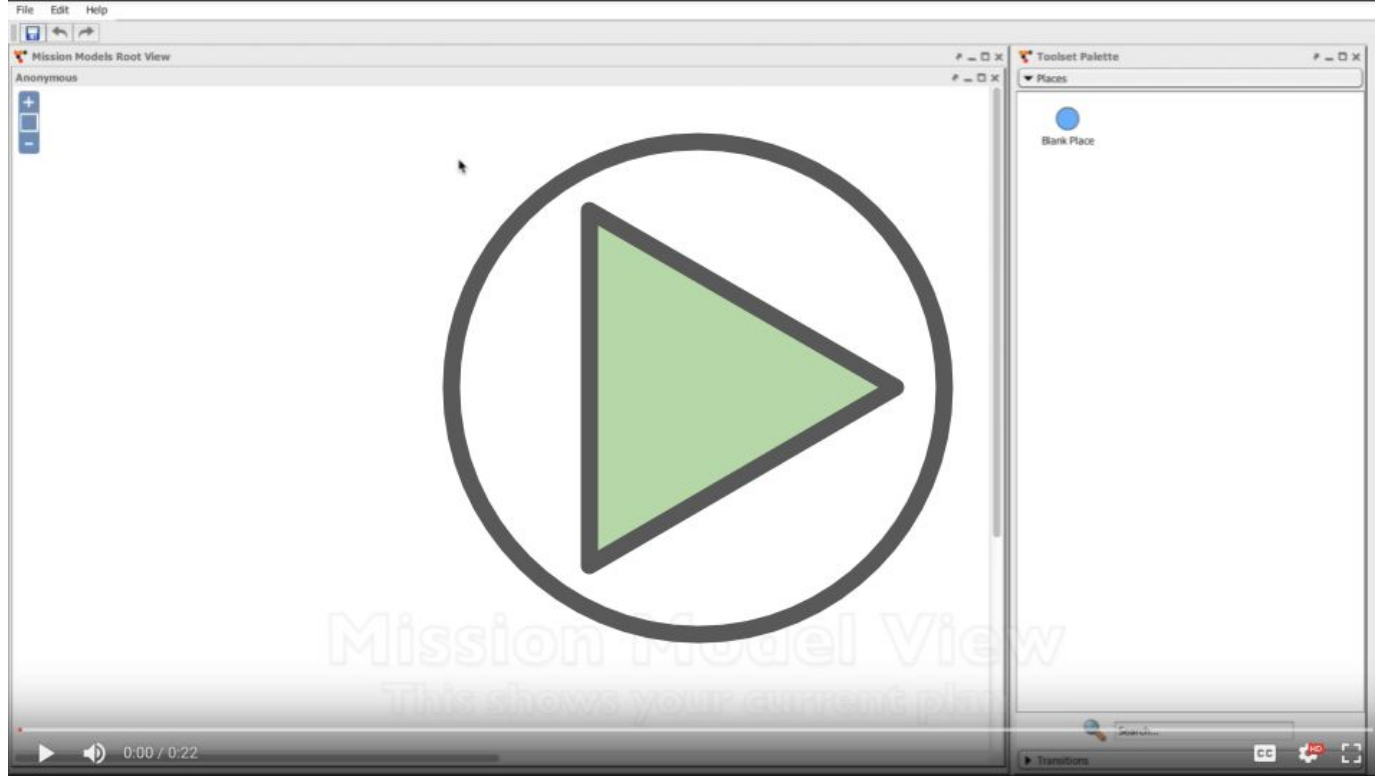


→RobotStartTimer: commands the robot to wait for a specified amount of time



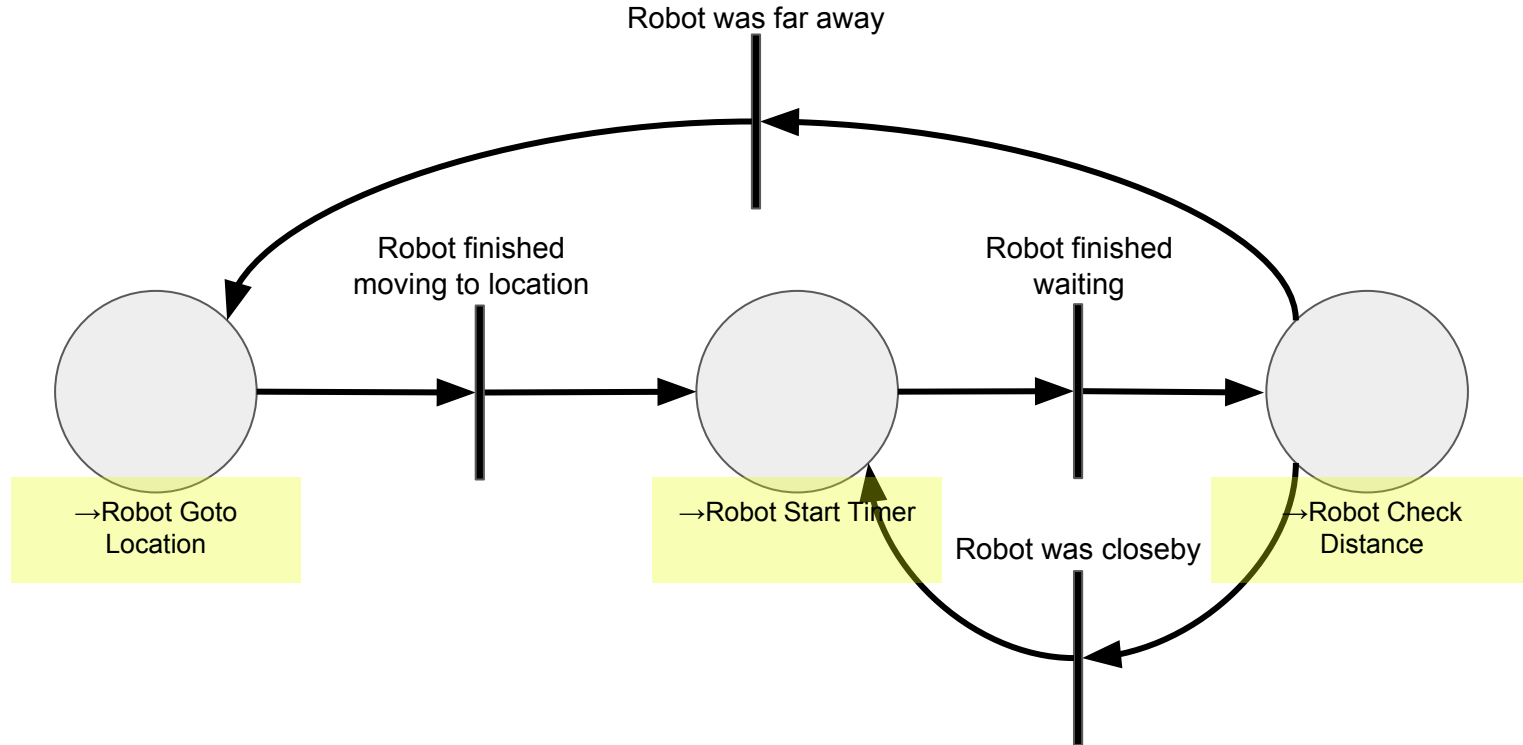


→RobotCompareDistance: commands the robot to compare its distance from a location to a specified distance



Watch “Output Events”: This video will show you how to add Output Events to Places.

Job 3-1: Add each of the output events to the SPN

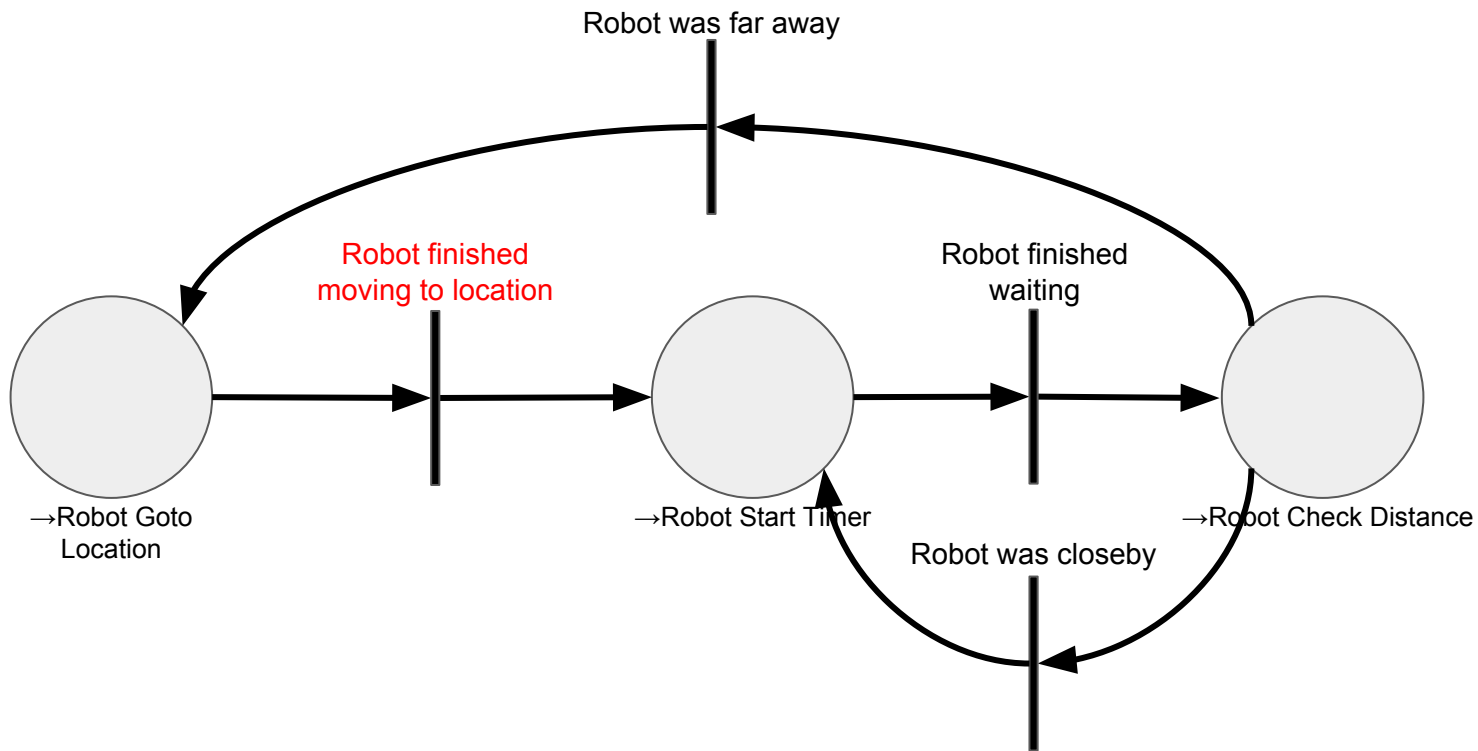


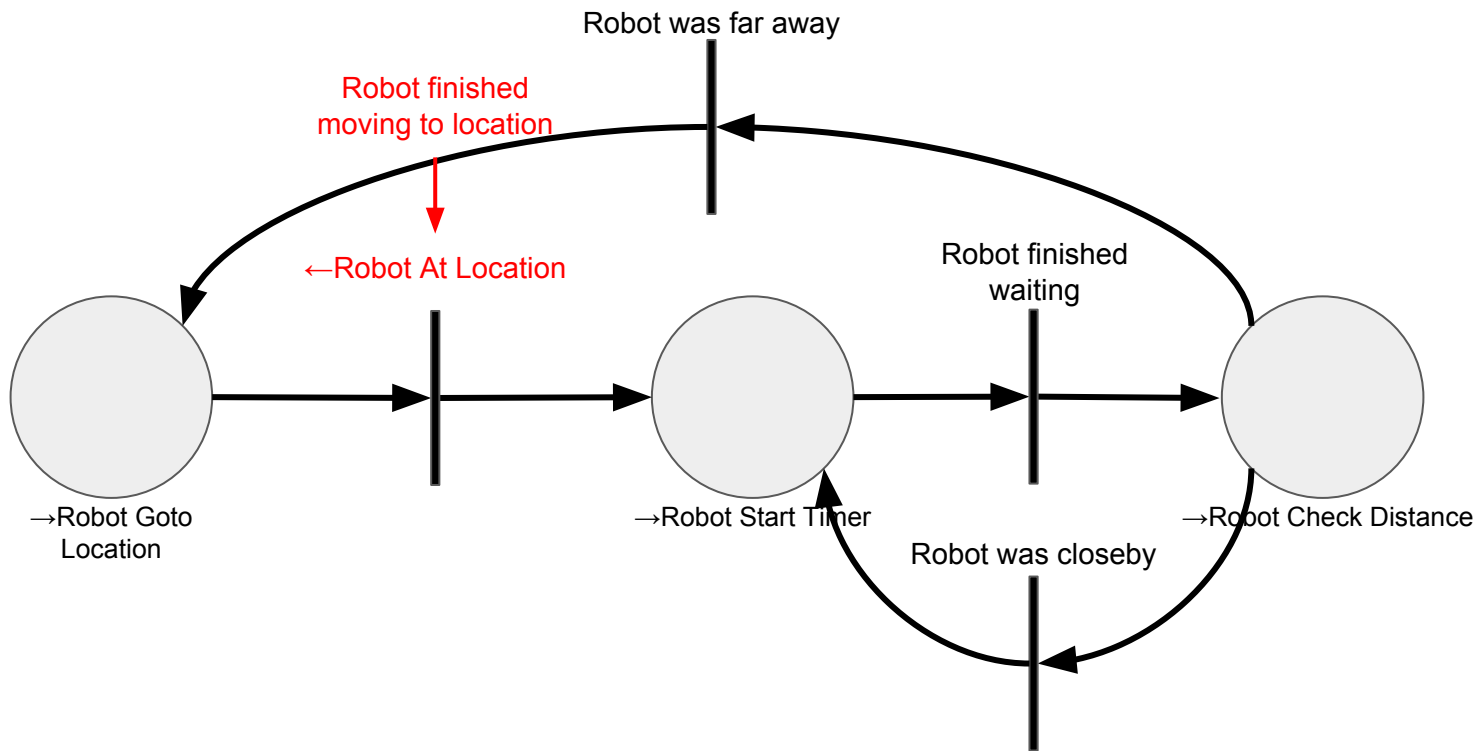
Input events: Are put on transitions and contain information sent by a team-member, such as a robot, an AI (artificial intelligence), or the operator.

The input events are generated when the robot, AI, or operator sends information.

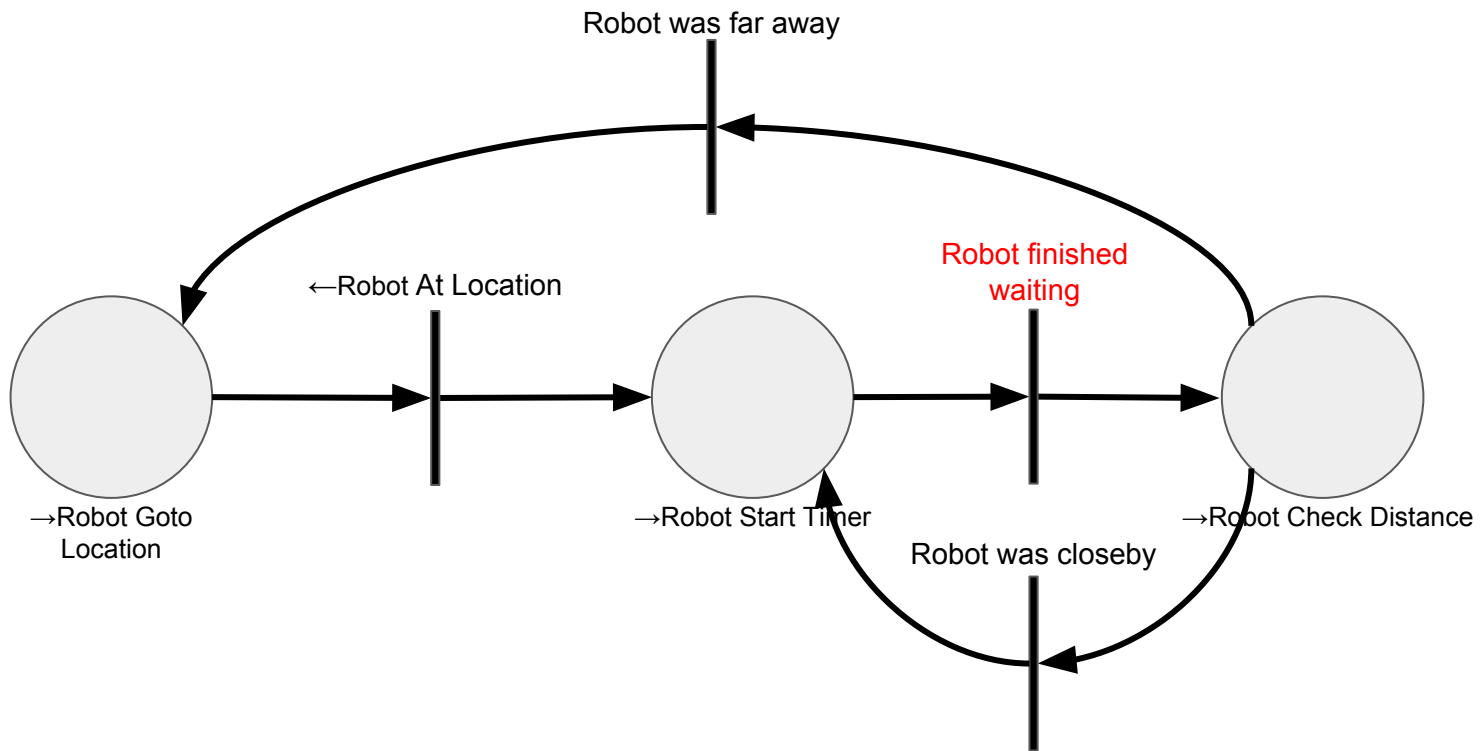
Below are some examples of input events. We put a left-facing arrow at the beginning of its name to indicate it is an input event.

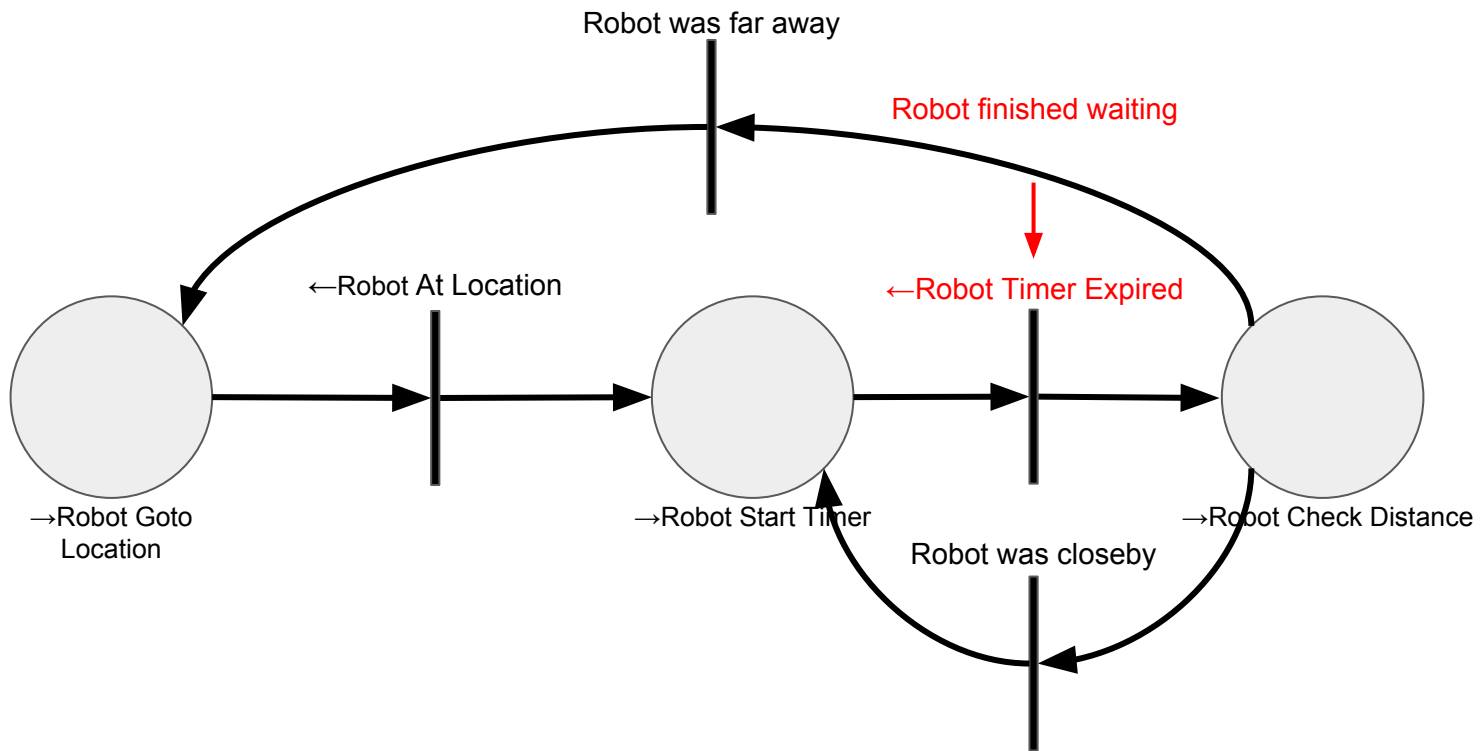
- ←Robot at Location: the robot has arrived at its assigned location
- ←Robot Timer Expired: the robot's timer has expired
- ←Quantity Greater: the first of two numbers compared by an AI was larger
- ←Quantity Lesser: the first of two numbers compared by an AI was lesser
- ←Quantity Equal: the two numbers compared by an AI were equal



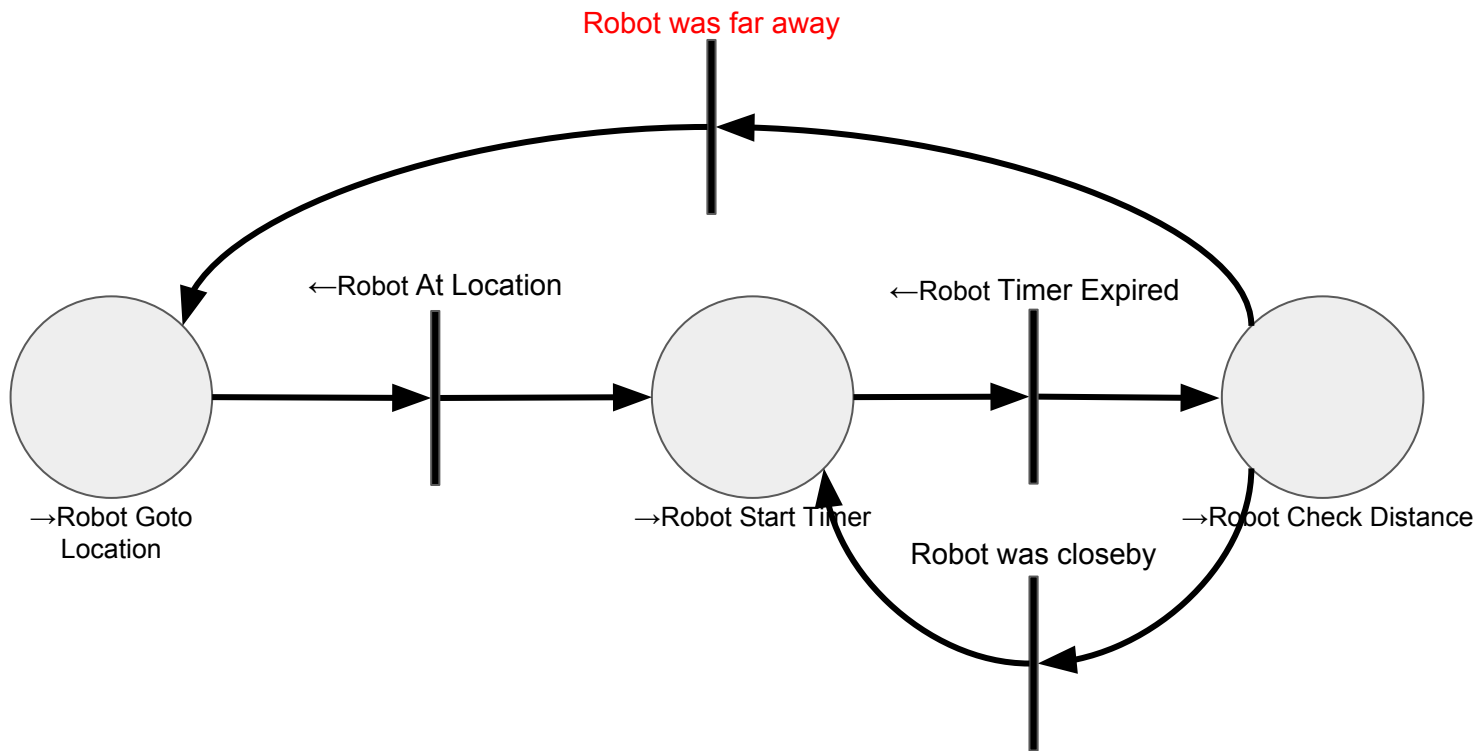


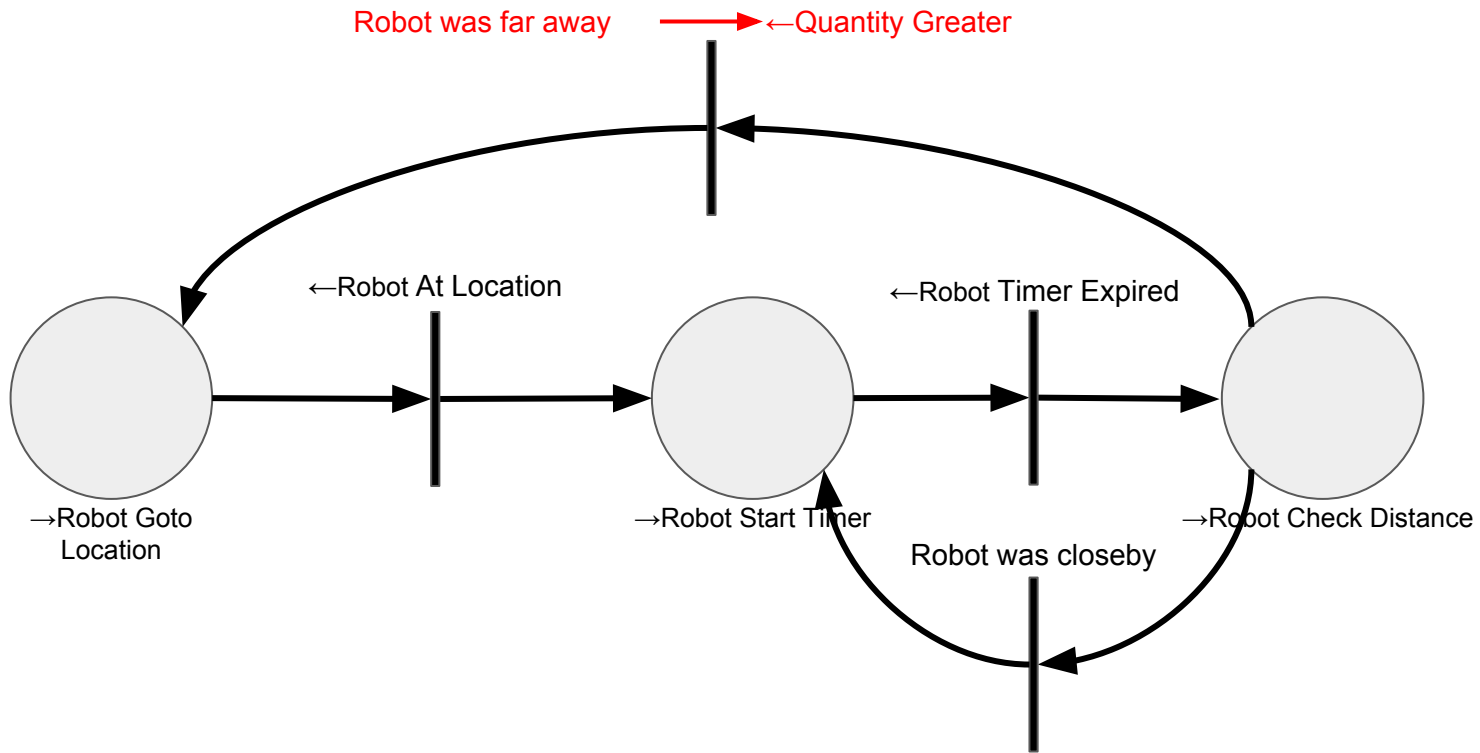
←RobotAtLocation: the robot has arrived at its assigned location



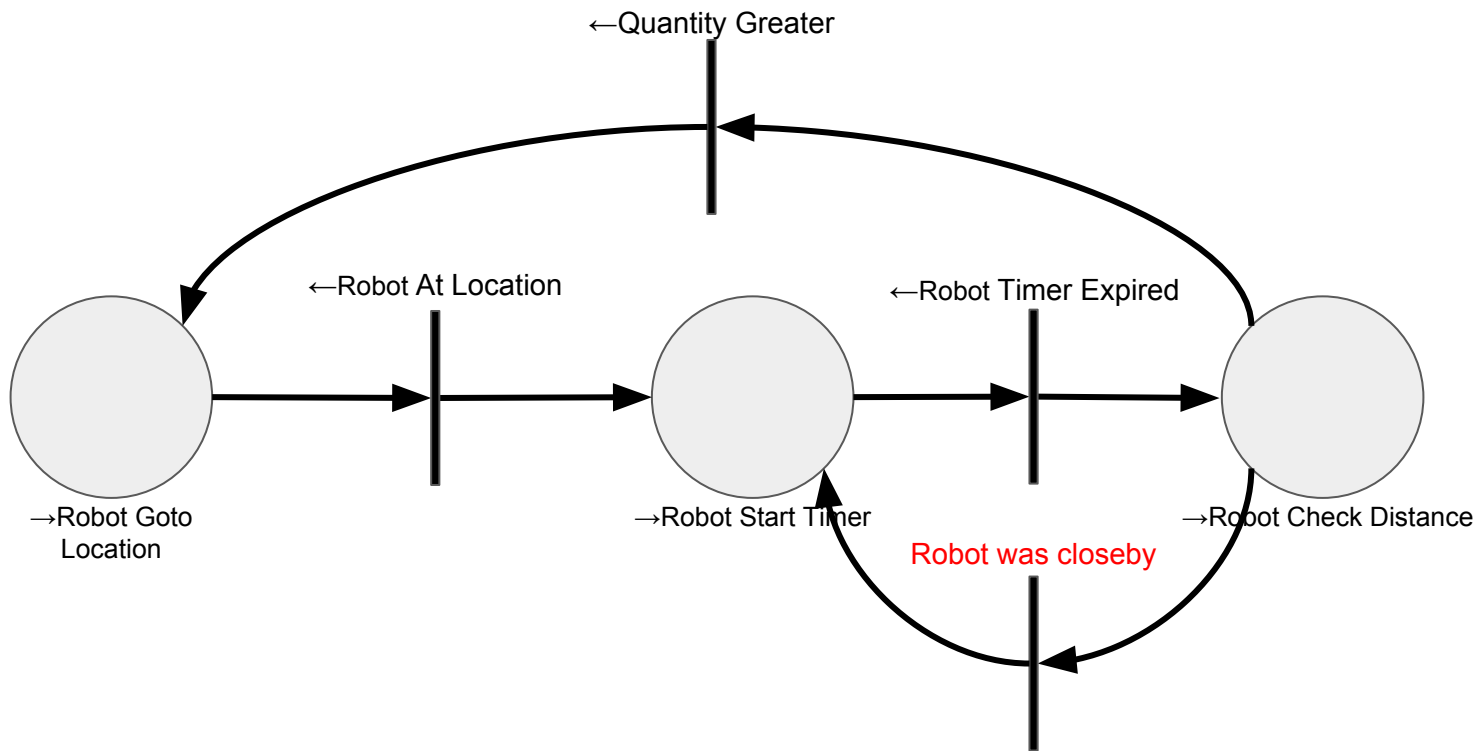


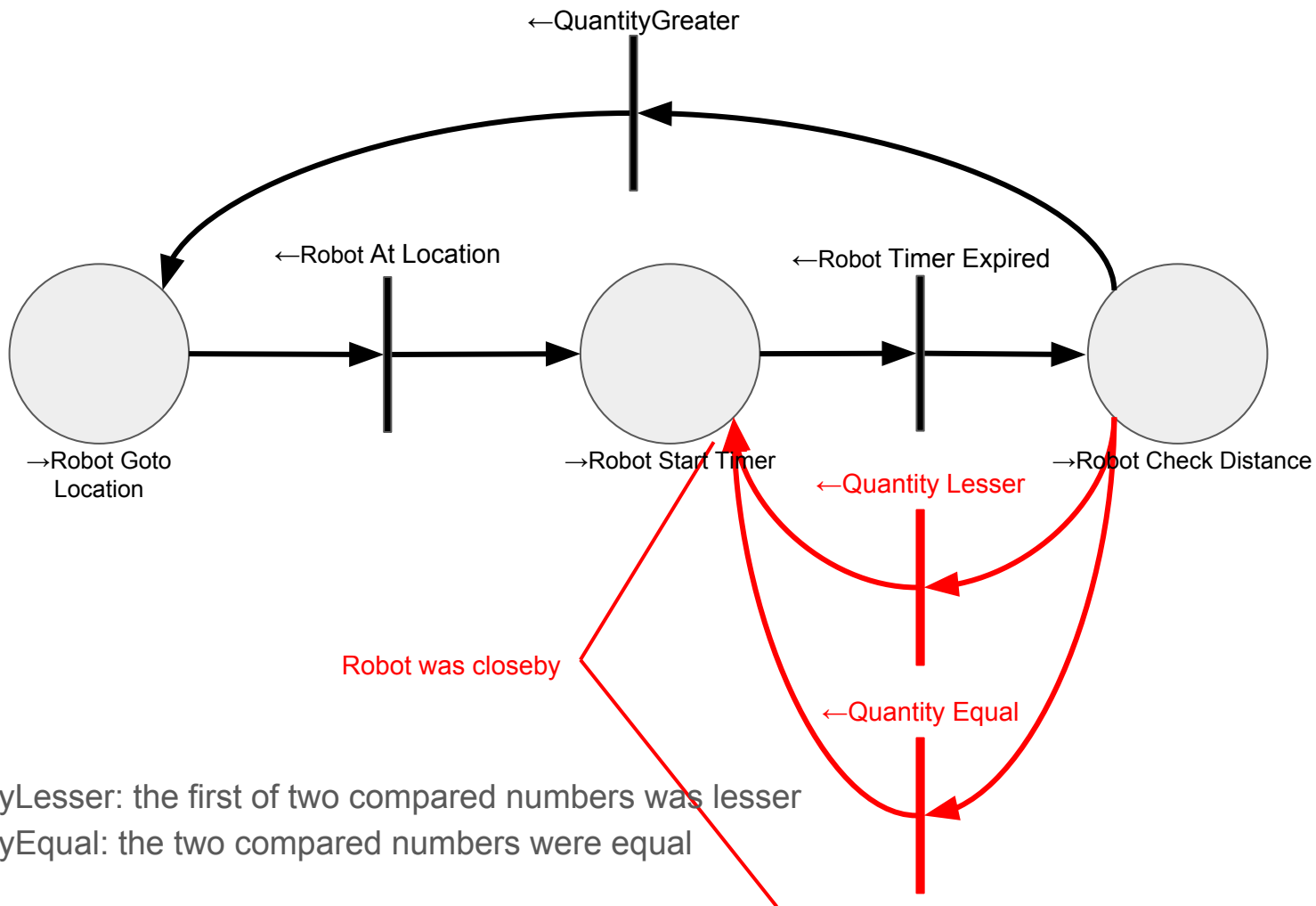
←RobotTimerExpired: the robot's timer has expired

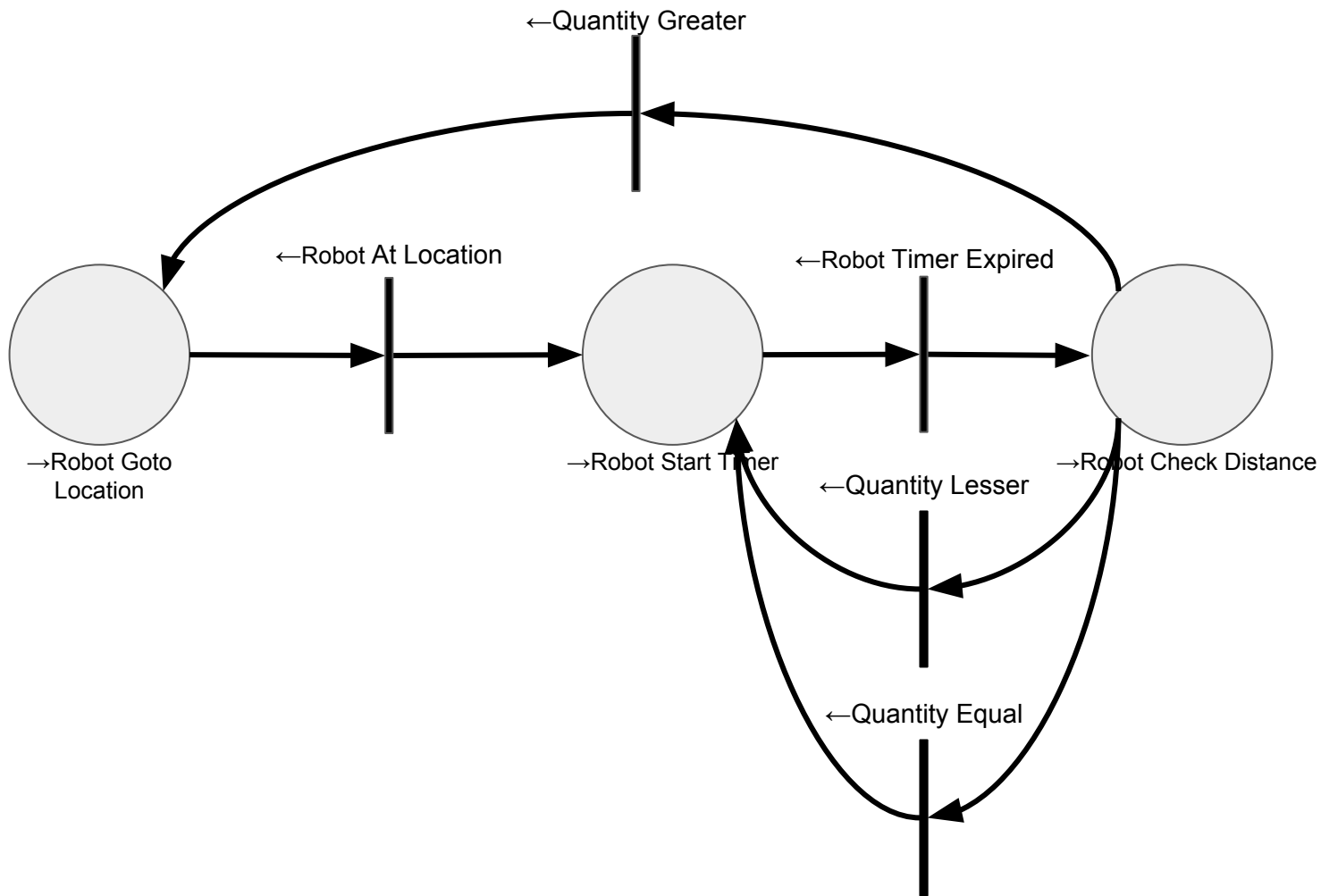


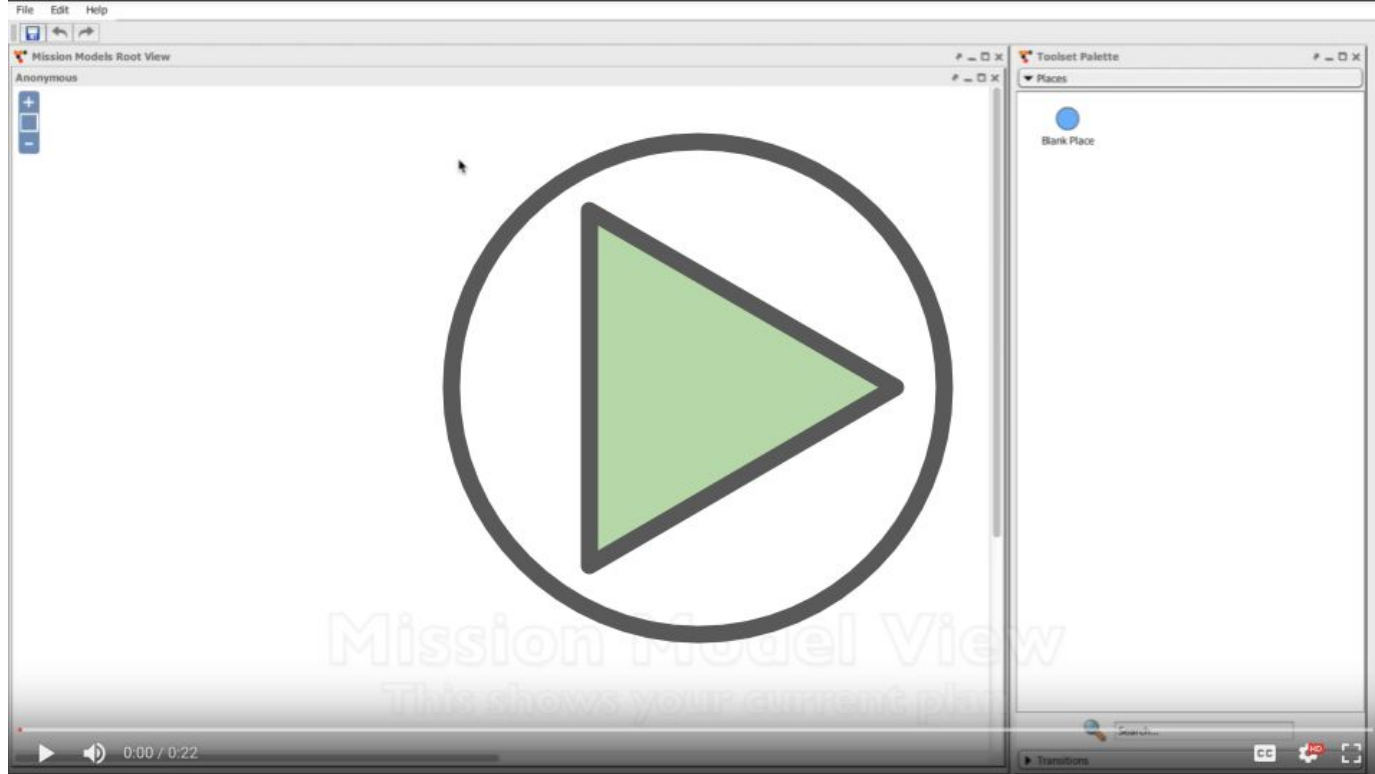


←QuantityGreater: the first of two compared numbers was larger



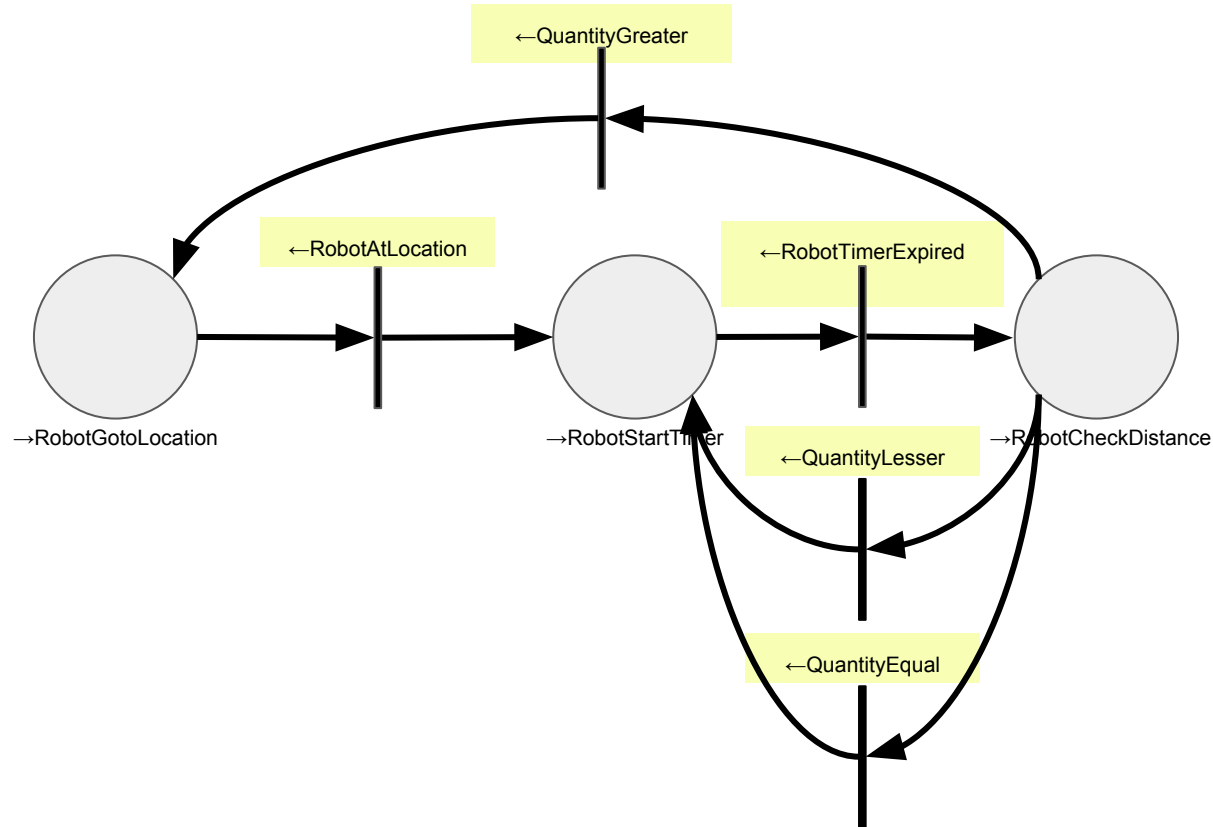




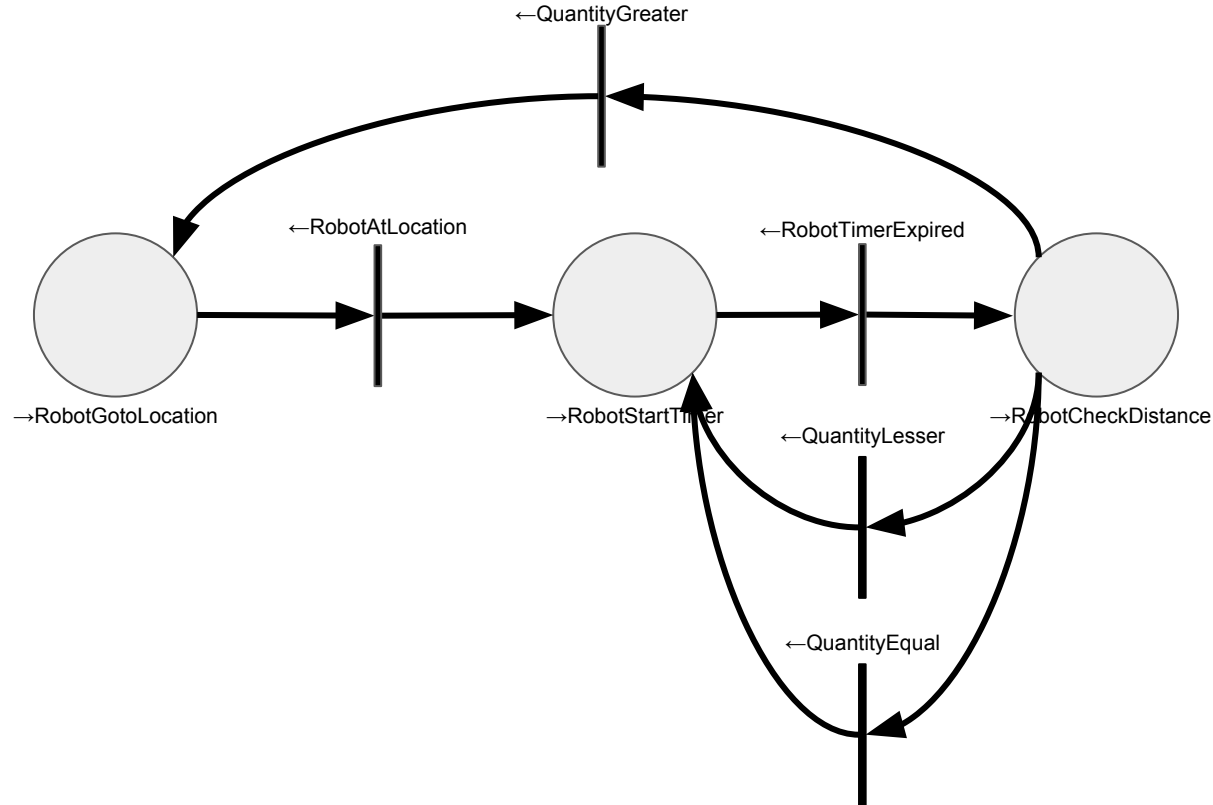


Watch “Input Events”: This video will show you how to add Input Events to Transitions.

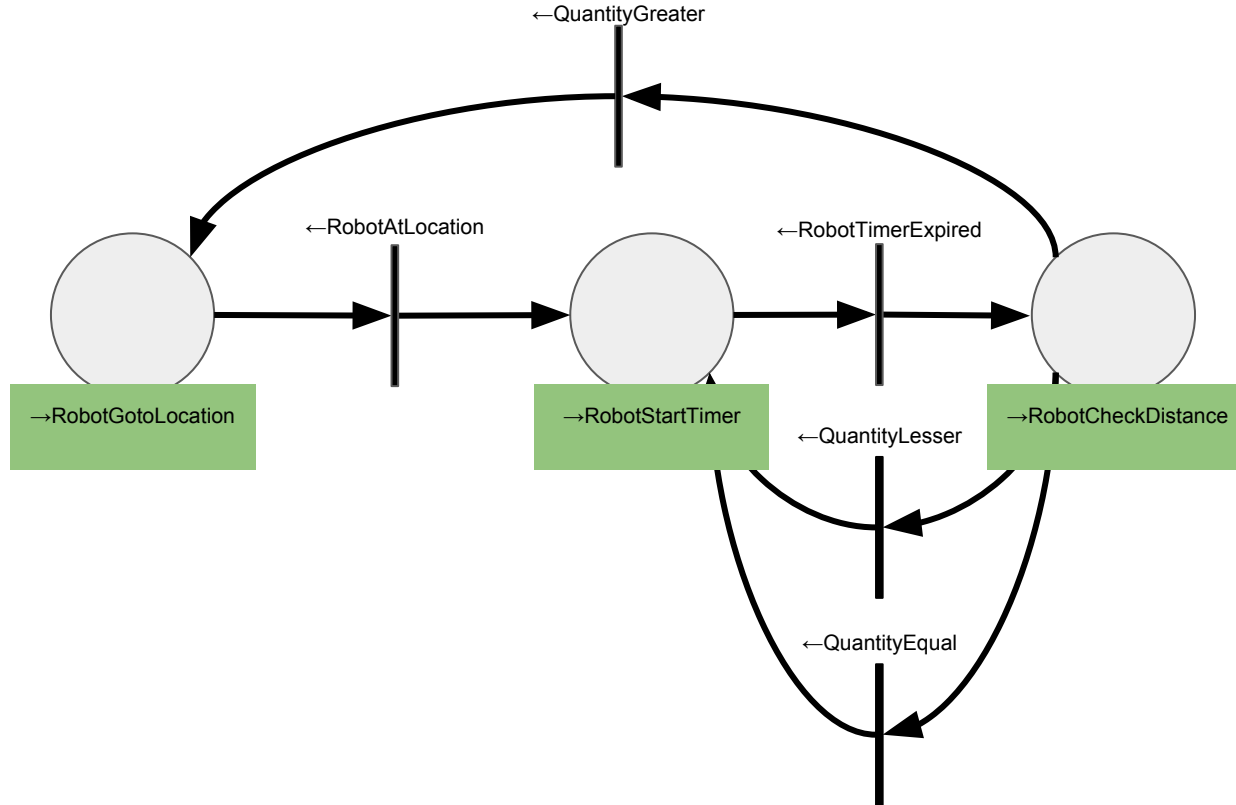
Job 3-2: Add each of the input events to the plan



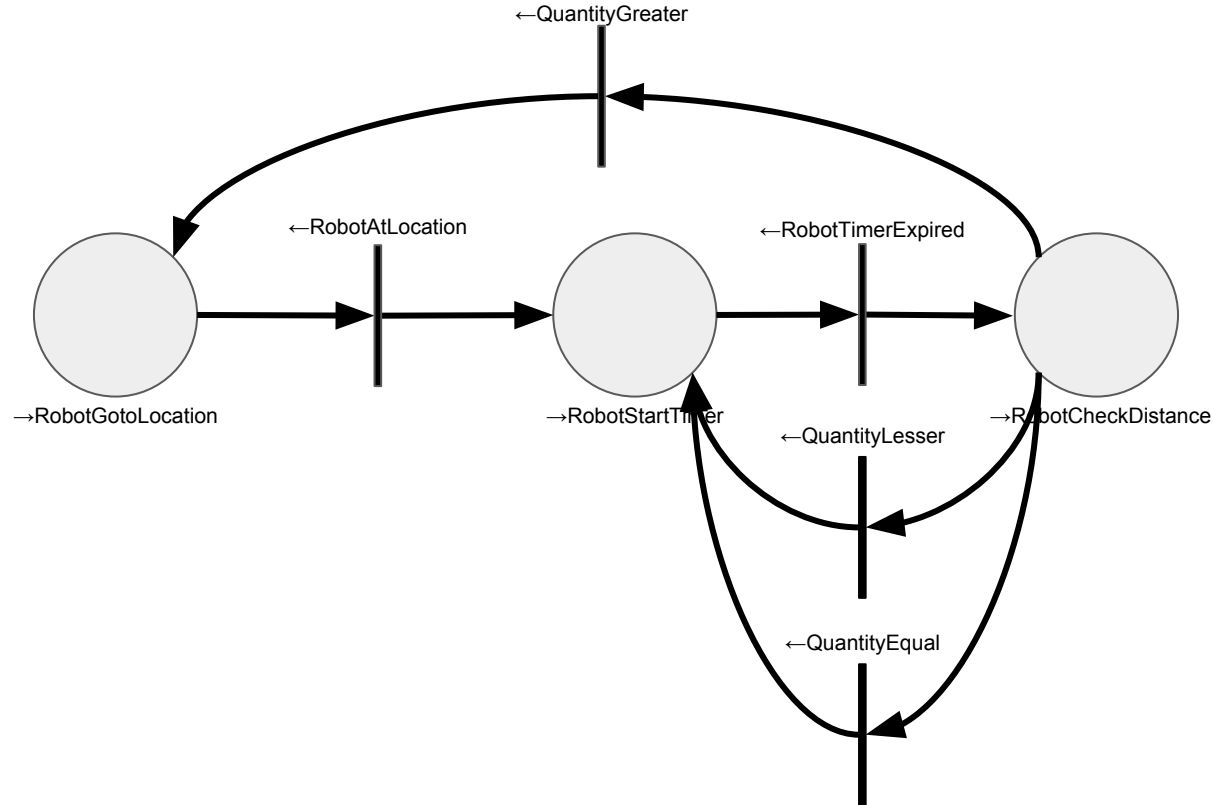
Quiz 3-1: Identify the output events



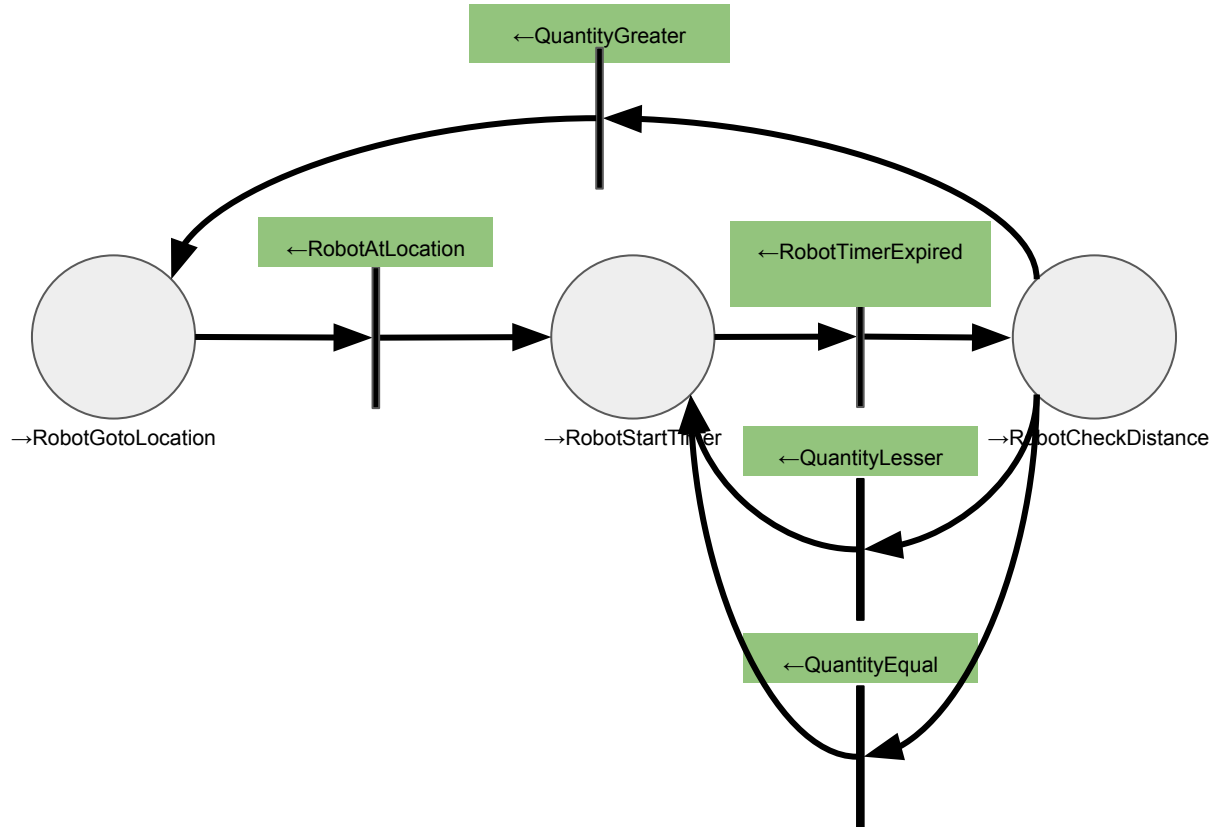
Quiz 3-1 Solution



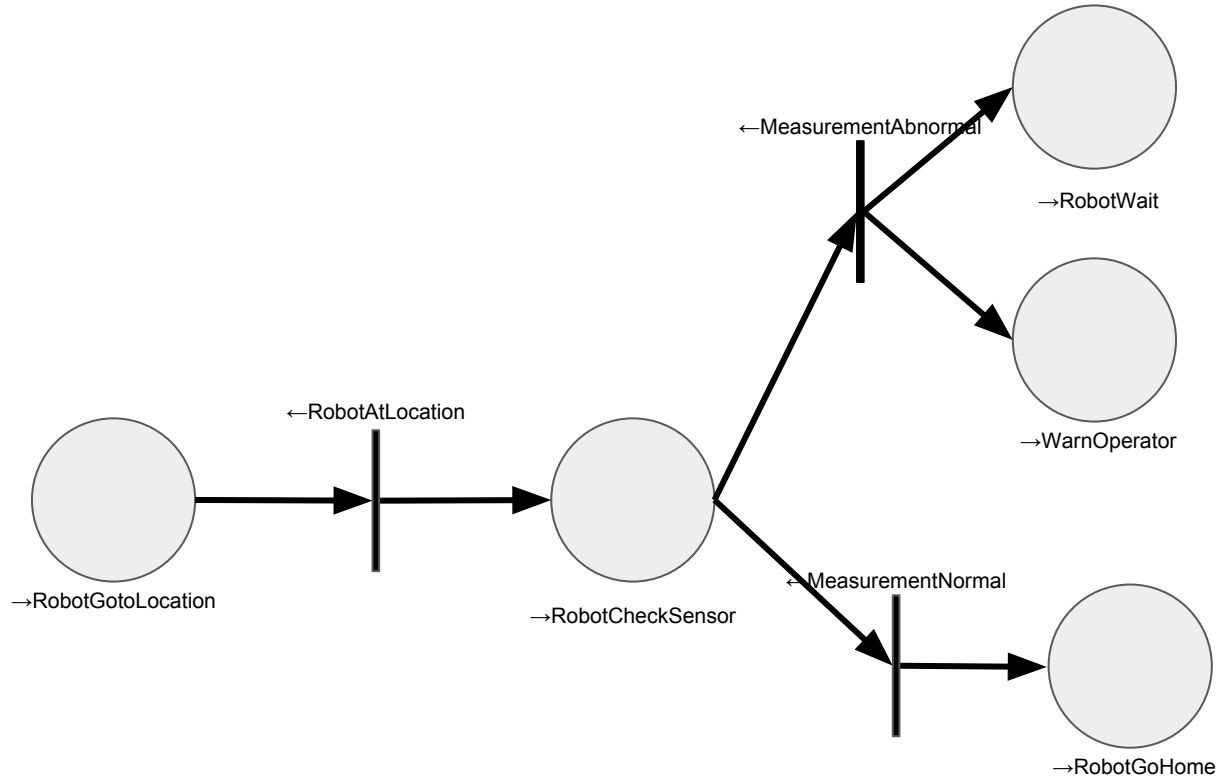
Quiz 3-2: Identify the input events



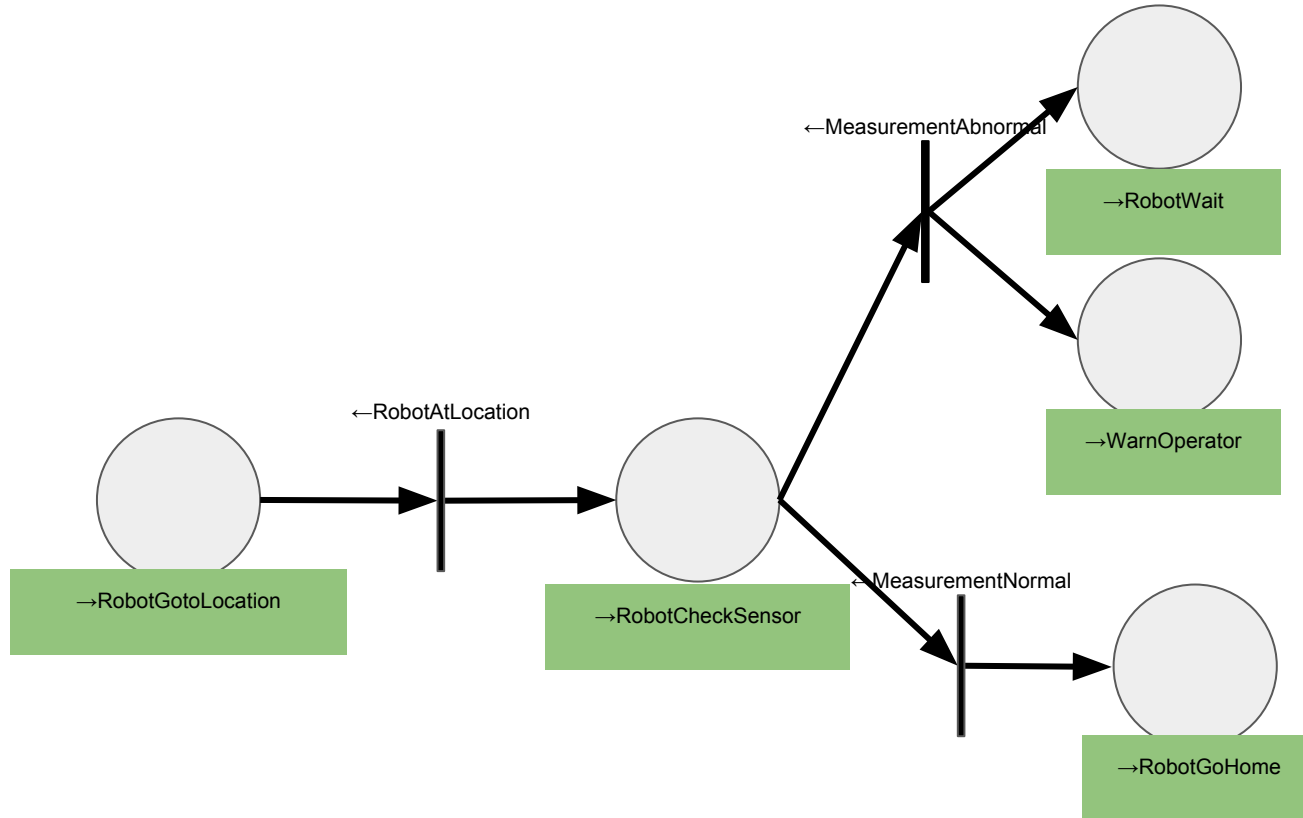
Quiz 3-2 Solution



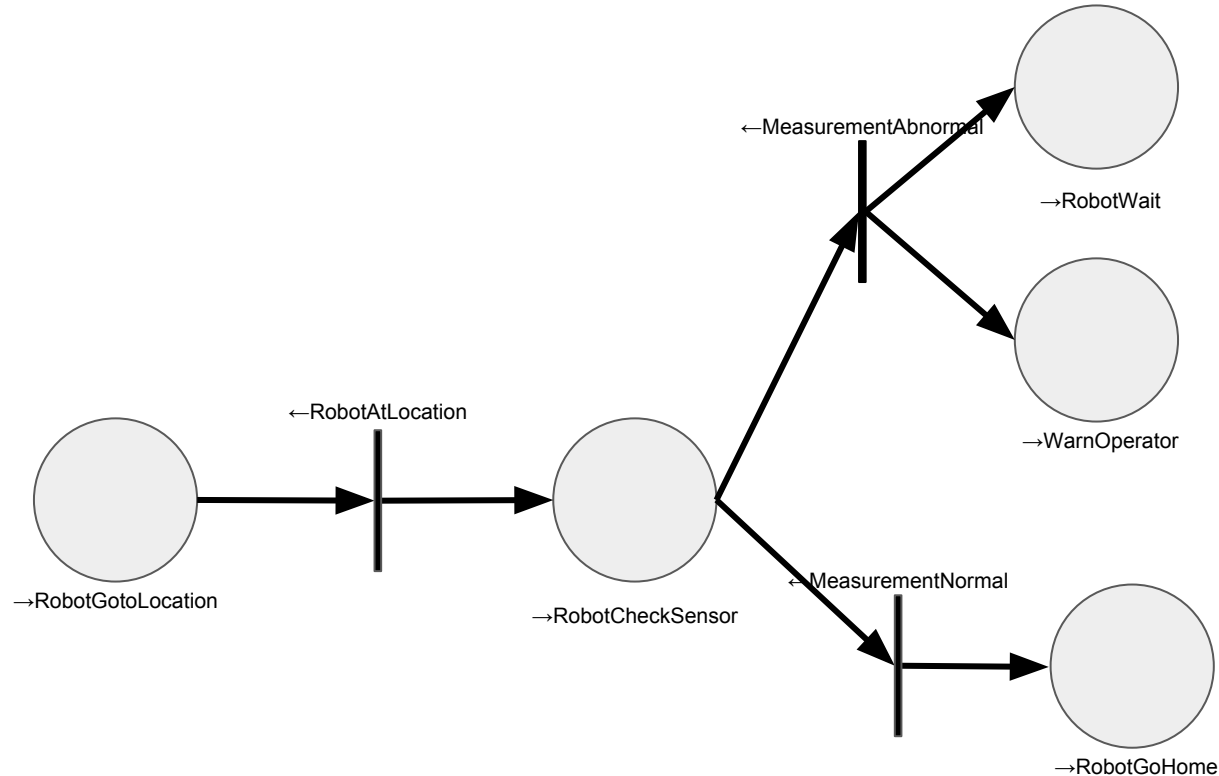
Quiz 3-3: Identify the output events



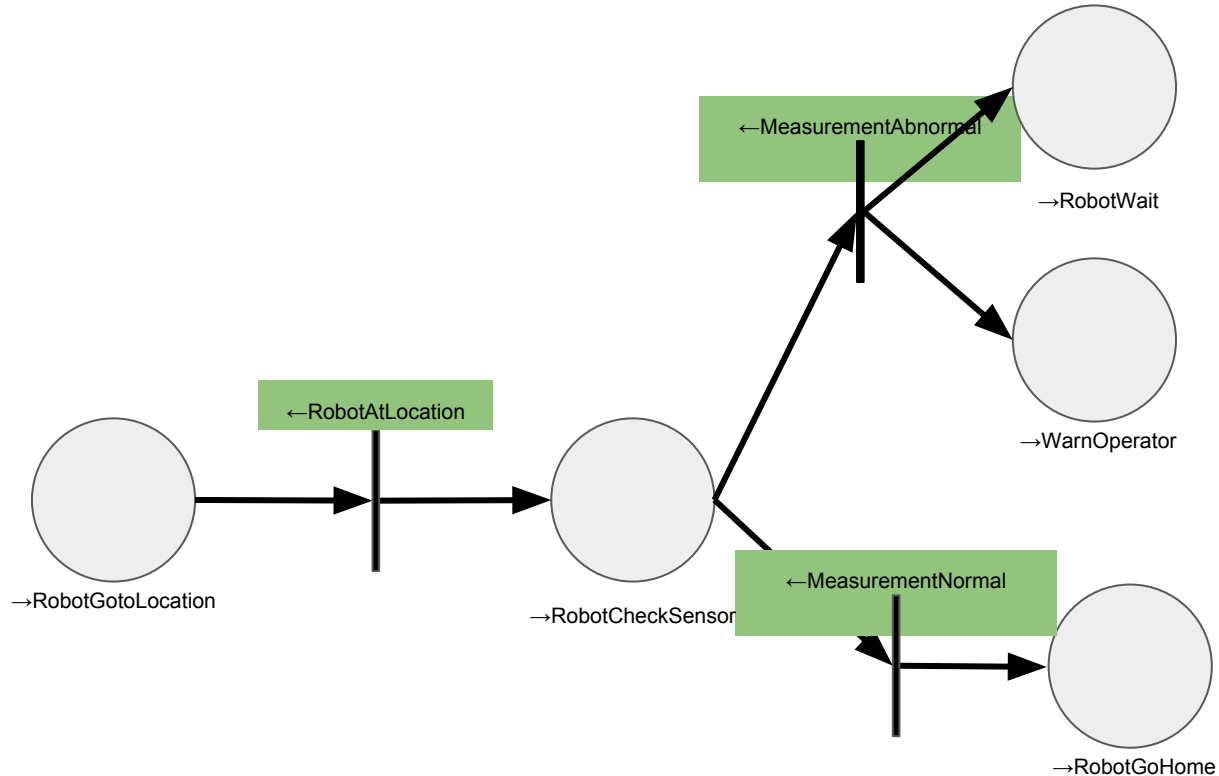
Quiz 3-3 Solution



Quiz 3-4: Identify the input events



Quiz 3-4 Solution



With the addition of **output events** we can send commands to the robot.

With the addition of **input events** we can receive information from the robot.

However, we don't have a way to represent the status of a particular robot.