HCA Tech Note 136

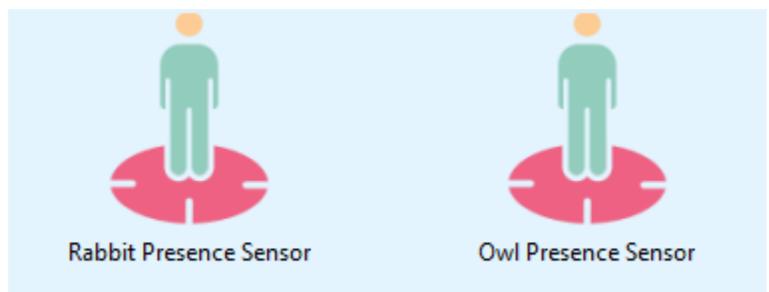## Implementing a change in house mode based upon presence sensors

This technical note shows how Arrival Sensors (also called Presence sensors) – supported by Hubitat and Smart Things – can be used to easily switch the home mode from "At Home" to "Away" and handle this for several family members.

A presence sensor is a small widget that you can attach to a key ring or backpack. The controlling hub and the sensor periodically attempt to make contact. If there is non-contact for several minutes, then the controlling hub marks the sensor as "away". As soon as contact is again made, the sensor is marked as "home". This method of not going to "away" until the contact is lost for a period of time eliminates false positives, and the return of status to "home" on a single contact provides for quick action when coming home.

Once these devices are added to your controlling hub and then imported into HCA using the usual method for Hubitat or SmartThings, then they can be integrated into your design.

The way that these sensors and HCA work, the sensor is considered "ON" when the sensor is in range and "OFF" when not.
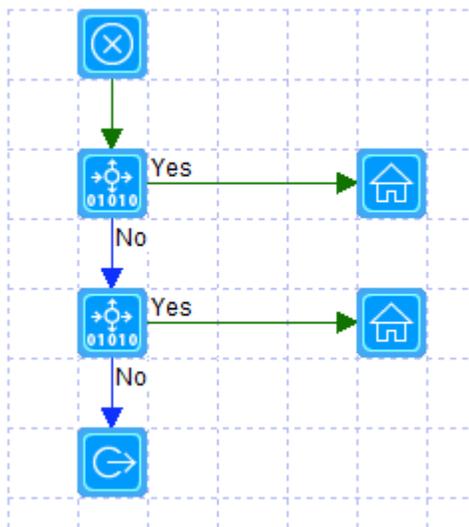
For this application, assume that there are two individuals in the home: Rabbit and Owl. The desire is that both must be away before the home mode is set to "Away", but when either arrives home then the home mode is set to "At home".

To accomplish this the State-Change trigger is used. This starts the program running when the state of a device changes from on to off, or off to on.

The triggers for this program are:

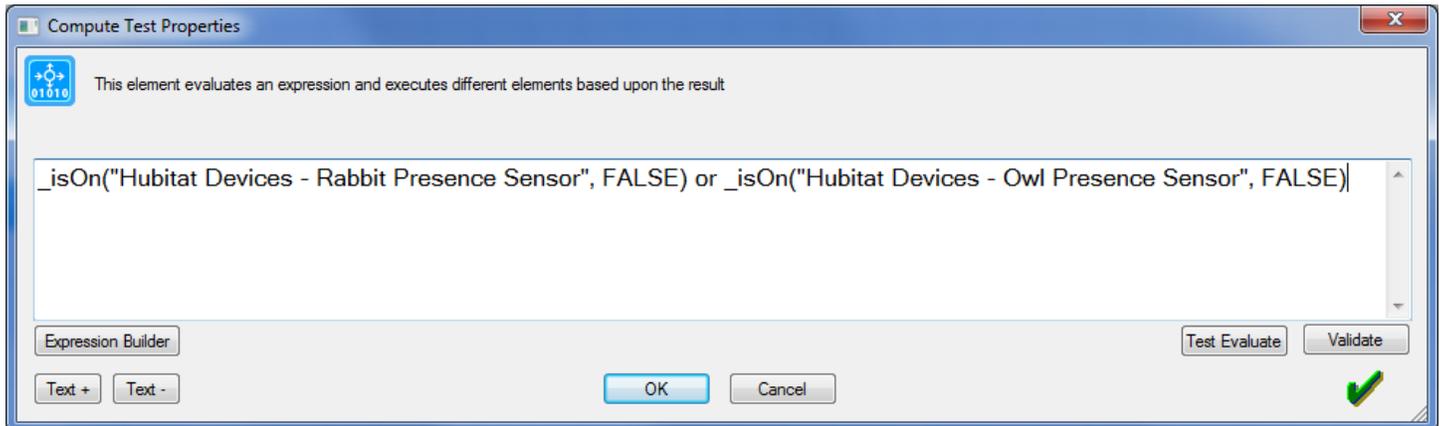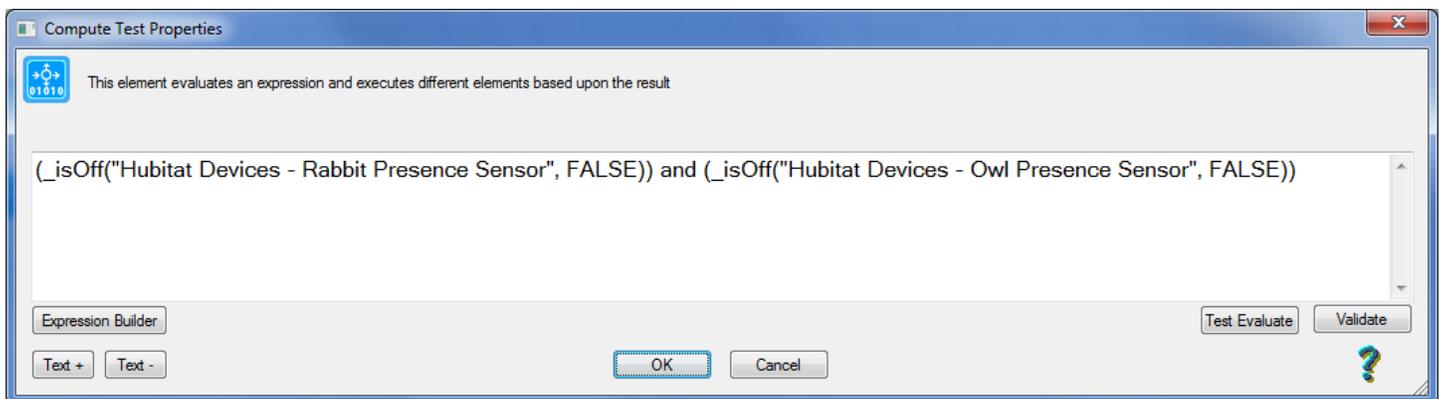| Trigger |
| --- |
| ⇛▶ When Hubitat Devices - Owl Presence Sensor changes state to OFF |
| ⇛▶ When Hubitat Devices - Owl Presence Sensor changes state to ON |
| ⇛▶ When Hubitat Devices - Rabbit Presence Sensor changes state to OFF |
| ⇛▶ When Hubitat Devices - Rabbit Presence Sensor changes state to ON |

The program is very simple – only six elements.

The first Compute-Test element is this:

This tests that <u>either</u> sensor is ON which means that either Owl or Rabbit is home. The _IsOn function takes two arguments: the name of the device and a second argument which says if HCA should poll the status of the device before making the test. In this case we don't need to do that because the sensors are reporting changes and keeping HCA up to date.

If this test passes, the "Yes" path is taken, and the home mode is set to "At Home" using the "Set Mode" element.

The second Compute-Test element is:

This tests to see if both sensors are OFF which means <u>both</u> Owl and Rabbit are not home. If this test passes, the "Yes" path is taken, and the home mode is set to "Away" using another "Set Mode" element.

TechSup@HCATech.com

www.homecontrolassistant.com

While home modes can do a lot, for example, controlling selected devices off or on, you could use this same technique to start a program that performs other actions in addition to changing the home mode. For example, if you have a computer with speakers it could announce "Welcome Home" using the Speak element.

This same approach could be extended to many more family members each with their own sensor. All that would be needed would be changing the Compute-Test elements to add in the test for these new sensors and adding the additional triggers for the new sensors.

##end##