

Camera Occupant location status & KG Test Result

Scenario 1: camera detect joe_smith, but it is not defined before(Unknow person detected)

input command: set sensor house1:kitchen1:camera1 status OCCUPANT_DETECTED value joe_smith

Output : Unknown person joe_smith detected

Scenario 2: camera in kitchen1 detect joe_smith, then Rover in dining_room1 ask Ava where joe is

input command: set sensor house1:kitchen1:camera1 status OCCUPANT_DETECTED value joe_smith

input command: set sensor house1:dining_room1:ava2 status LISTENING value "rover says: 'where is joe_smith'"

Output:

input query:

joe_smith is_in ?.

output:

Joe_smith is_in House1:kitchen1.

Scenario 3: camera in kitchen1 detect joe_smith, then it detect joe left kitchen1 entered dining_room1,
then Rover in dining_room1 ask Ava where joe is.
(This shows the KG can updated the loacation of joe)

input command: set sensor house1:kitchen1:camera1 status OCCUPANT_DETECTED value joe_smith

input command: set sensor house1:kitchen1:camera1 status OCCUPANT_LEAVING value joe_smith

input command: set sensor house1:dining_room1:camera1 status OCCUPANT_DETECTED value joe_smith

input command: set sensor house1:dining_room1:ava2 status LISTENING value "rover says: 'where is joe_smith'"

Output:

input query:

joe_smith is_in ?.

output:

Joe_smith is_in House1:dining_room1.

Scenario 4: joe in dining_room1 ask ava2 to do things.

input command: set sensor house1:dining_room1:ava2 status LISTENING value "joe_smith says: 'lights on'"

light1 in house1:dining_room1 is on

light2 in house1:dining_room1 is on

input command: set sensor house1:dining_room1:ava2 status LISTENING value "joe_smith says: 'open door'"

door2 in house1:dining_room1 is open

door1 in house1:dining_room1 is open

input command: set sensor house1:dining_room1:ava2 status LISTENING value "joe_smith says: 'thermostat temperature 70'"

The temperature of the thermostat is now 70

Scenario 5: rover ask ava joe's status when joe is active

input command: set sensor house1:dining_room1:ava2 status LISTENING value "rover says: 'joe_smith is ?'"

input query:

joe_smith is ?.

output:

Joe_smith is Active.

Scenario 6: Light and thermostat status change depends on occupant status
(default temperature of thermostat is 75,
change by 5 when call "cooler" or "warmer"
intensity of light is 50,
change by 5 when call "dimmer" or "brighter")

when there are no thermostat or light in the room (not defined before), report the info.

input command: set sensor house1:kitchen1:camera1 status OCCUPANT_LEAVING value
joe_smith

joe_smith left house1:kitchen1
no lights in this room
no thermostat in this room

when there are light or thermostat defined before

input command: set sensor house1:kitchen1:camera1 status OCCUPANT_DETECTED value
joe_smith

joe_smith entered house1:kitchen1
ligh3 in house1:kitchen1 is ON
light4 in house1:kitchen1 is ON
The temperature of the thermostat3 is now 80

29.

input command: set sensor house1:kitchen1:camera1 status OCCUPANT_LEAVING value
joe_smith

joe_smith left house1:kitchen1
ligh3 in house1:kitchen1 is OFF
light4 in house1:kitchen1 is OFF
The temperature of the thermostat3 is now 75

30.

input command: set sensor house1:dining_room1:camera1 status OCCUPANT_DETECTED value
joe_smith

joe_smith entered house1:dining_room1
light1 in house1:dining_room1 is ON
light2 in house1:dining_room1 is ON
The temperature of the thermostat1 is now 80

31.

input command: set sensor house1:dining_room1:camera1 status OCCUPANT_INACTIVE value
joe_smith

joe_smith is sleeping
The intensity of the light is now 40
The intensity of the light is now 40

Scenario 6 : KG updates when occupant status change

input command: set sensor house1:dining_room1:camera1 status OCCUPANT_INACTIVE value
joe_smith

joe_smith is sleeping

The intensity of the light is now 40

The intensity of the light is now 40

37.

input command: set sensor house1:dining_room1:ava2 status LISTENING value "rover says:
'joe_smith is ?'"

input query:

joe_smith is ?.

output:

Joe_smith is Sleeping.

38.

input command: set sensor house1:dining_room1:camera1 status OCCUPANT_ACTIVE value
joe_smith

joe_smith is active

39.

input command: set sensor house1:dining_room1:ava2 status LISTENING value "rover says:
'joe_smith is ?'"

input query:

joe_smith is ?.

output:

Joe_smith is Active.