Smart Home Automation

Presented by Joe Chappell – Connected HHI

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About Me

- Raised in suburban Philadelphia with lots of technology exposure

- Began programming at 12

- Spent 30 years in IT and then software companies

- CEO of 4 tech startups based in Boston

- Moved to HHI in 2010

- Started Connected HHI in 2016 after spending several years helping friends and property management customers with tech projects and problems

Presentation Flow

- ▶ What is Smart Home Automation?

- ▶ What is in it for me?

- ▶ Technology Building Blocks

- ▶ Use Cases

- ▶ How Can I Get Started?

- ▶ Q&A

Smart Home Automation Defined

The application of technology to **simplify** the **control** and **management** of household functions and operations.

Usually with a smartphone interface.

Control Examples

- Lighting Control – on, off, dimming

- Garage Doors – status, open and close

- HVAC – adjusting temperatures

- Irrigation Control – Zones on and off

- Entertainment – controlling music selection and zones

- Viewing internal and external video from your phone

Smartphone and now Voice Options

Management Examples

- ▶ Thermostat settings based on my presence
- ▶ Scheduling Irrigation based on weather forecasts
- ▶ Turning off water supply if leak is detected
- ▶ Alerting owner if temperature exceeds target maximum
- ▶ Turning on Foyer Lamp when Doorbell rings
- ▶ Alerting owner if smoke is detected in your home
- ▶ Alerting owner when someone is in or near their home

Adding intelligence to control

What's in it for me?

▶ Security – cameras, sensors, access control

▶ Remotely monitoring and managing home

▶ Reducing costs – electricity and water

▶ Mitigating damage

▶ Making routine things easier

Technology Building Blocks

Necessary Elements:

▶ Internet service – with adequate capacity

▶ Reliable WiFi in the necessary areas of the home

▶ Smartphone – Apple or Android in most cases

▶ Smart Home Devices

Technology Building Blocks

Additional Layers:

- ► Control Hubs - Wink, SmartThings
  - ► Required for many sensors and controls
  - ► Enable If-This-Then-That Scenarios
- ► Voice Assistants – Alexa, Google Home, HomePod
  - ► Bypass the Smartphone
  - ► Increase the usability of many devices

Incompatibility Abounds

▶ There is no single standard for home automation and control

▶ Alexa, Google, and Apple for voice assistants

▶ Bluetooth, WiFi, Z-Wave, and Zigbee for communication protocols

▶ Works with Wink or SmartThings or HomeKit

▶ Works with Alexa (BUT REQUIRES A HUB)

Use Case 1 – Ozzie and Harriet

Senior couple living in Sea Pines. Not technology savvy. Concerned about security and would like to manage their energy bills. Received an Echo for Christmas.

▶ They like the idea of cameras in front and rear of home that allow them to see what is happening. They like the idea of sensor lights that come on at night when motion is detected.

▶ A smart thermostat will adjust to their patterns and will cut back when they are out of the home. It will also let them know if their HVAC is having issues.

▶ Lighting controlled by Alexa allows them to control lights without reaching for light switches.

▶ Alexa streams their choice of music on command so they listen to a lot more music and a lot less TV.

▶ Their garage door can be opened remotely and will alert Harriet when Ozzie left the door open again.

Use Case 2 – Art

Splits his time between HHI and Atlanta. His HHI house is on the beach and has a pool. He has maintenance people, but likes to know what is going on when he is traveling.

► External cameras give him a view of the entries, the pool, and the ocean. Internal cameras allow him to see when people are in the home and shut down when he is home.

► He has several HVAC zones that know when people are present and adjust accordingly.

► Lighting inside the home is controlled by a combination of schedules and sensors to minimize energy use when nobody is home.

► A lover of music, he has music streaming through the house and outdoors.

► A pool and spa controller allows him to turn up the spa temp as he leaves the airport.

► An avid wine collector, he has sensors monitoring the temperature of his wine cellar and will receive alerts if the temps are too high or low.

Use Case 3 - Madonna

- Has a condo that she uses as a getaway when she gets a break from her entertainment business. She lets special friends and family use it occasionally, but it sits vacant often. Her regime takes care of most management.

- Selected a keyless door lock with unique access codes so that she can see when people are in the unit and automatically log the ins and outs. She can add and delete codes from her phone and not worry about lost or duplicate keys.

- Sensors for motion, water, temperature, and humidity allow her to monitor her home conditions and call for service if needed.

- A smart thermostat manages energy use and adapts to periods of occupancy.

Getting Started

▶ Start small

▶ Pick an area – security, entertainment, remote management, lighting, . . .

▶ DIY – read reviews, consult YouTube, ask friends, understand compatibility

▶ Consult a Professional

Common Pitfalls

- Spontaneous purchases at Sams Club, Costco, or Home Depot with no clear plan or understanding of needs or compatibility.

- Buying older versions of technology.

- Buying products without understanding what it will take to "make it work."

Q&A

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Recommended Technology*

- Amazon Echo / Alexa for voice control
- Ring for WiFi doorbell cameras, outdoor cameras and sensor lights
- Canary for indoor cameras and all-in-one sensor units
- Wink for control hubs
- Ecobee and Nest for smart HVAC controls
- Nest for CO and Smoke detectors
- Schlage and Yale for keyless locks
- Lutron and Leviton for lighting controls – Zwave
- Rachio for Irrigation Controllers