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Jeff Gamet is the Mac Observer's Managing Editor, and co-host of the Apple Context Machine and The iOS Show podcasts, hosts The Mac Observer Daily Observations podcast, and is a regular guest on The Big Show.

He is the author of "The Designer's Guide to Mac OS X" from Peachpit Press, and writes for several design-related publications. Jeff has presented at events such as Macworld Expo, the RSA Conference, and the Mac Computer Expo.

In all his spare time, he makes guest appearances on several other podcasts, too. Jeff dreams in HD.



IOT & HOME AUTOMATION

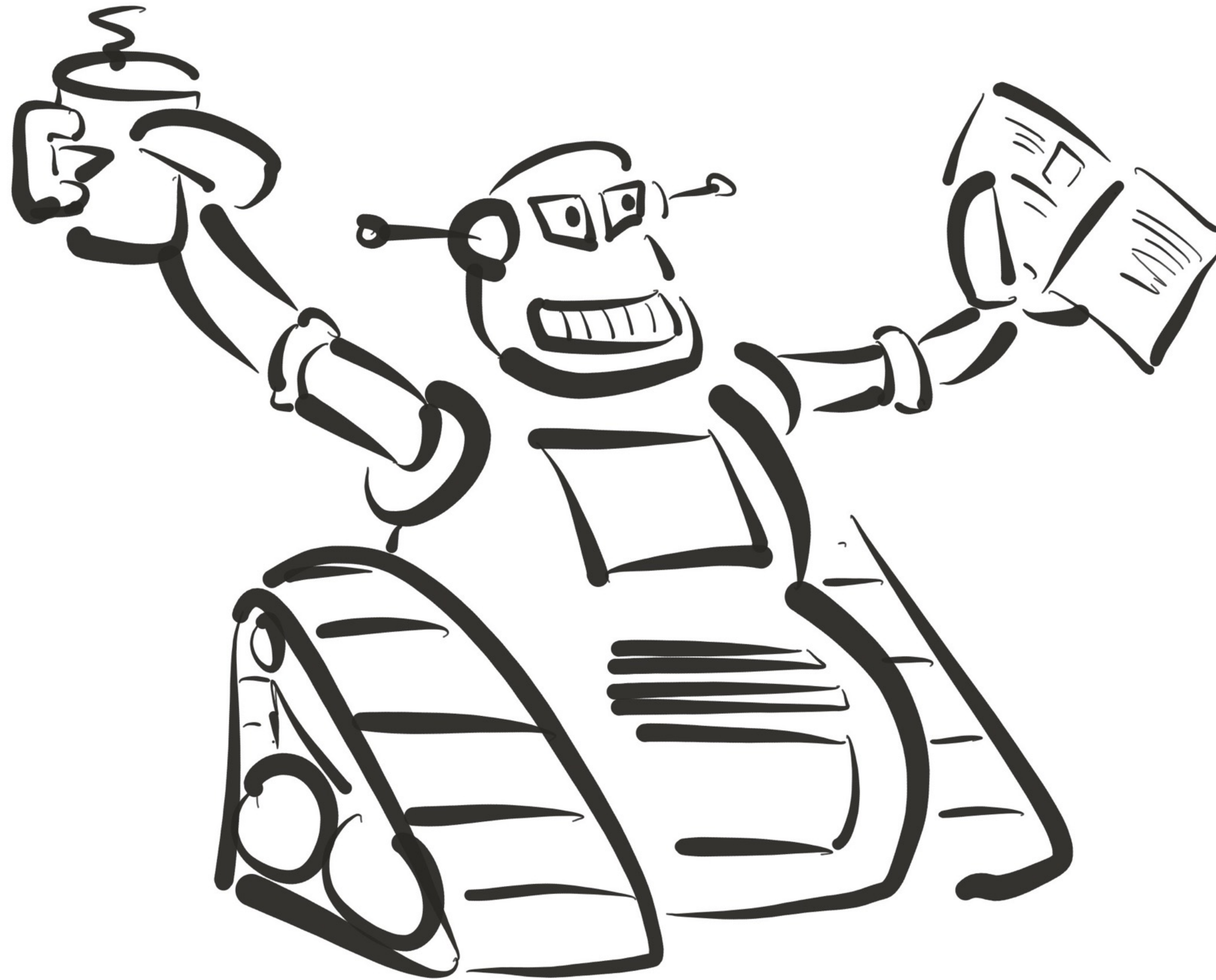
WHAT YOU NEED TO KNOW



Special thanks to
Danielle DiBella

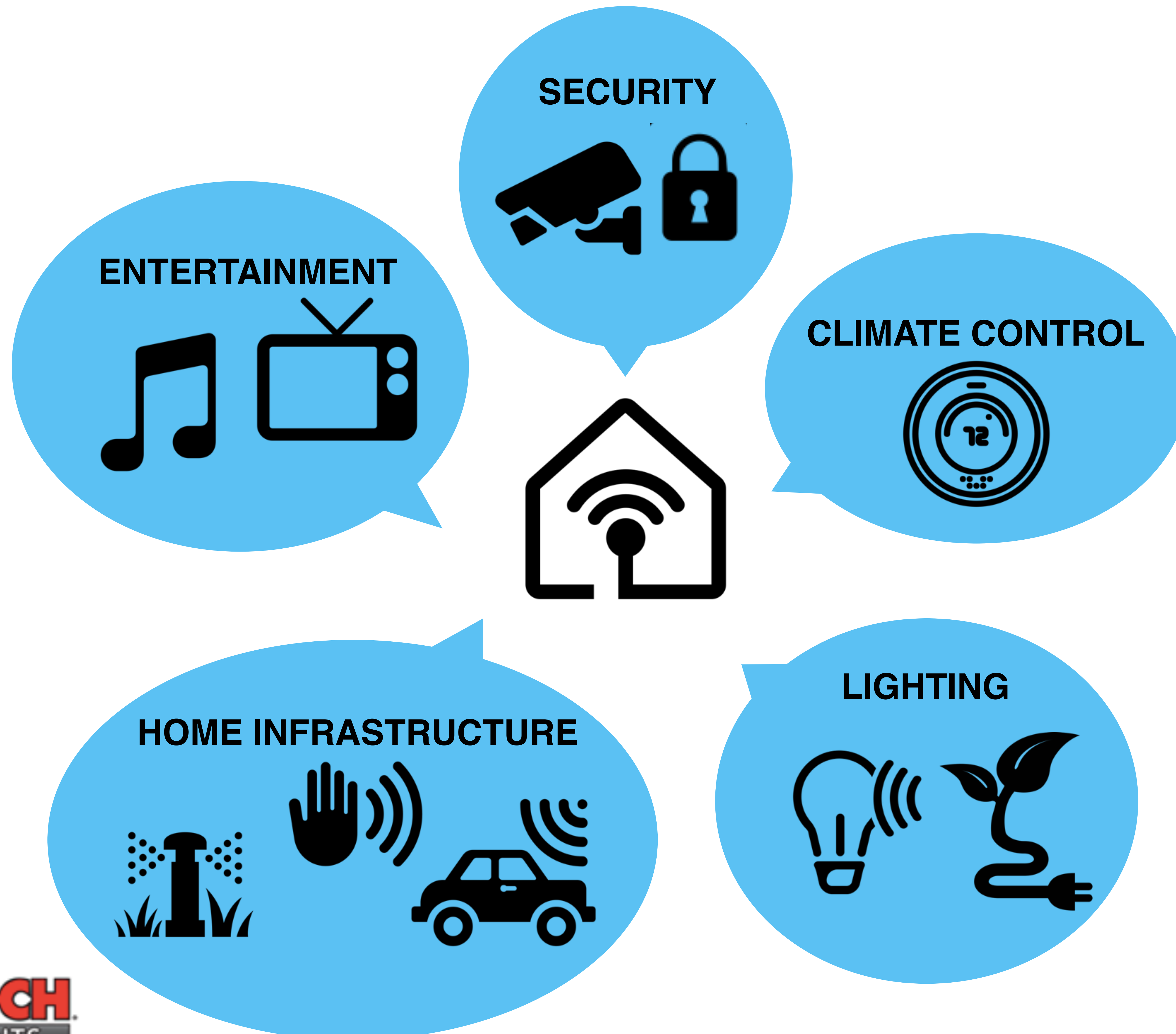
THE SMART HOME

IOT & HOME AUTOMATION



THE SMART HOME

IOT & HOME AUTOMATION



AGENDA

IOT & HOME AUTOMATION

SIGNALING TECHNOLOGIES



PLATFORMS



SIGNALING TECHNOLOGIES : X10

IOT & HOME AUTOMATION

- **PIONEERING TECHNOLOGY** 1975
- **POWERLINE** wired into the walls
- **SLOW** bursts of 120 kHz RF signal to responders
- **LOW RELIABILITY** sensitive to line noise
- **SECURITY** no encryption
- **UPB** based on X10



SIGNALING TECHNOLOGIES : INSTEON

IOT & HOME AUTOMATION

- **COMPATIBILITY** X10, not an open standard
- **DUAL BAND** radio-frequency and powerline
- **RELIABLE** simulcast, scalable
- **FAST** 2880-38400 bps
- **EASY SETUP** Statelink
- **CONSUMER** Hub and Hub Pro

I N S T E  N[®]

SIGNALING TECHNOLOGIES : LUTRON

IOT & HOME AUTOMATION

- **PROPRIETARY PROTOCOL**
- **50+** years of innovation
- **15,000** products
- **ADVANCED LIGHTING**
- **WINDOW SHADE CONTROL**
- **CONSUMER** Lutron Caséta Wireless Smart Bridge



SIGNALING TECHNOLOGIES : ZIGBEE

IOT & HOME AUTOMATION

- **PURE WIRELESS** 802.15.4 IEEE, RF signaling/control
- **OPEN STANDARD** for hobbyists
- **MEMBERSHIP CONFLICT** fee to the ZigBee Alliance
- **COMMERCIAL/UTILITY INDUSTRIES** few in HA
- **MORE EXPENSIVE** than Insteon and Z-wave
- **CONSUMER** Crestron and Control4



SIGNALING TECHNOLOGIES : Z-WAVE

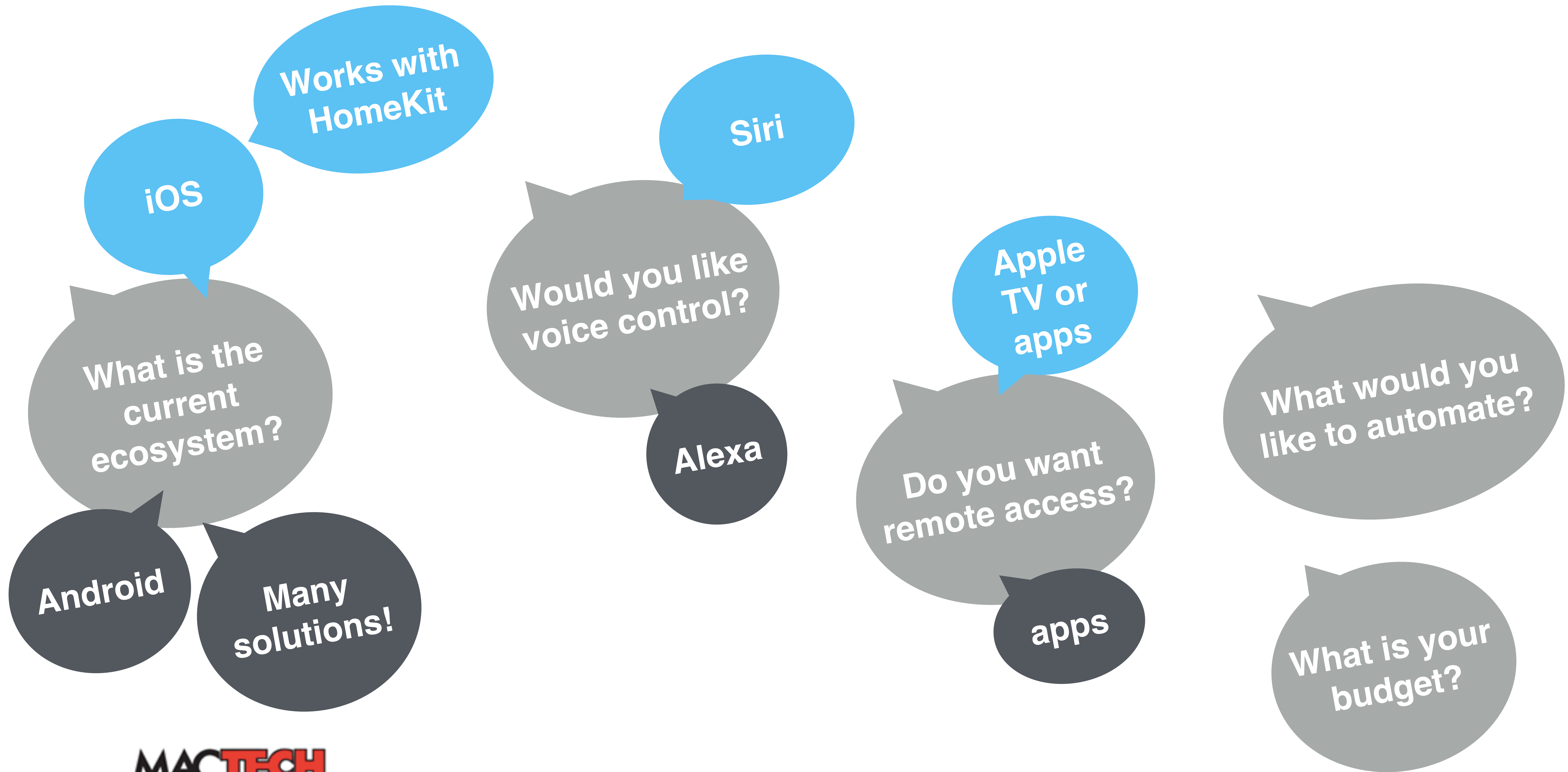
IOT & HOME AUTOMATION

- **PURE WIRELESS** RF signaling/control
- **BASED ON ZIGBEE** more simple, less expensive
- **NETWORK CONTROLLER** hub, setup and manage network
- **NETWORK SIZE** 232 nodes, but 30-40 ideal
- **LOW POWER** good for battery power
- **CONSUMER** SmartThings, Wink



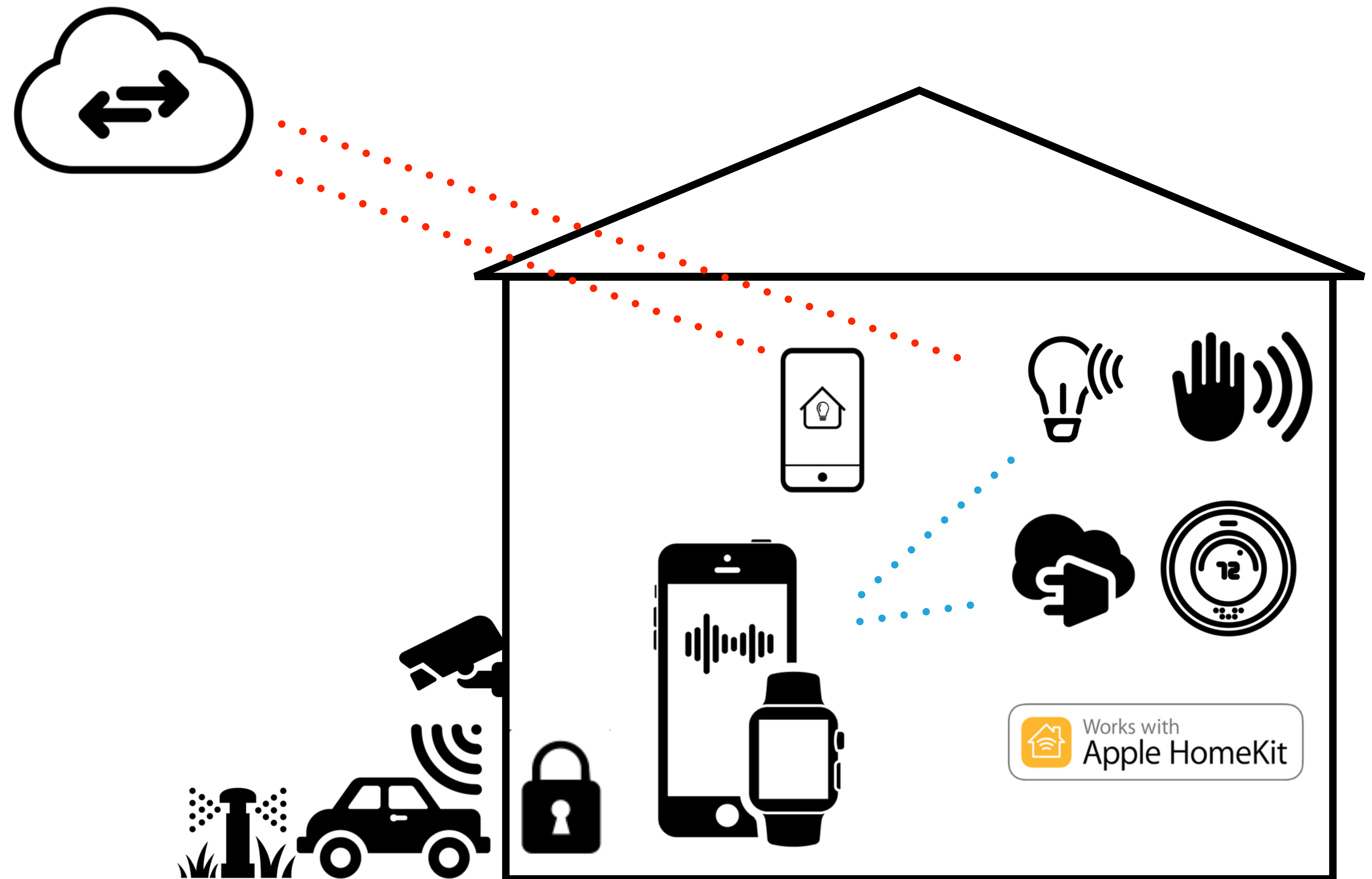
THE PLATFORMS

IOT & HOME AUTOMATION



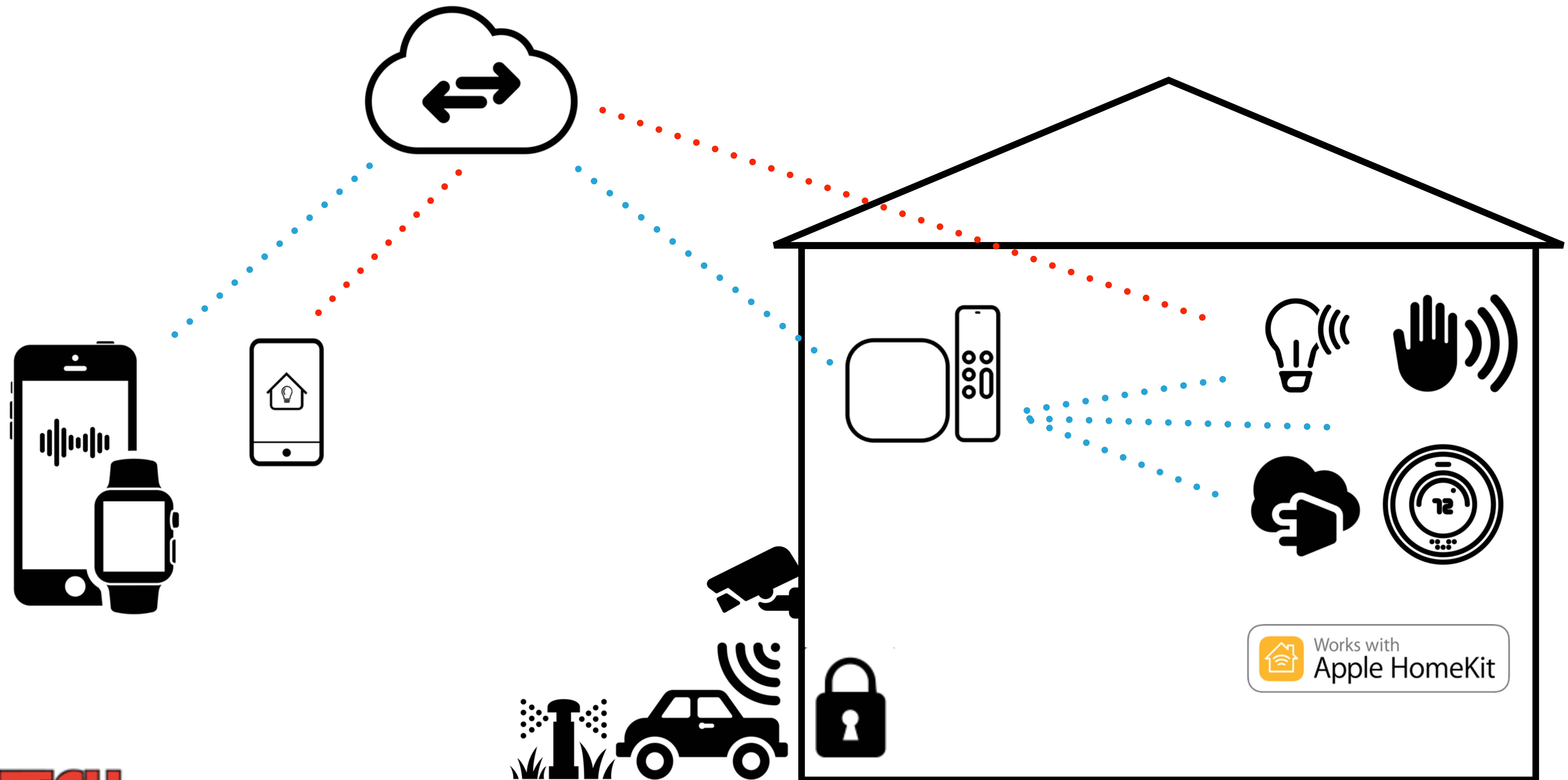
THE PLATFORMS : HOMEKIT

IOT & HOME AUTOMATION



THE PLATFORMS : HOMEKIT WITH REMOTE ACCESS

IOT & HOME AUTOMATION



THE PLATFORMS : HOMEKIT WITH OTHER SIGNALING TECHNOLOGIES

IOT & HOME AUTOMATION

INSTEON®
LUTRON®

MACTECH
PRO EVENTS



THE PLATFORMS : HOMEKIT

IOT & HOME AUTOMATION

- **HOMEKIT COMPATIBLE APPS**
- **SETUP CODE STICKER** use app and scan
- **CLASSIFICATION OPTIONS** in each app
- **COMMON DATABASE**
a home, room, accessory, function, setting must have its own name



THE PLATFORMS : HOMEKIT

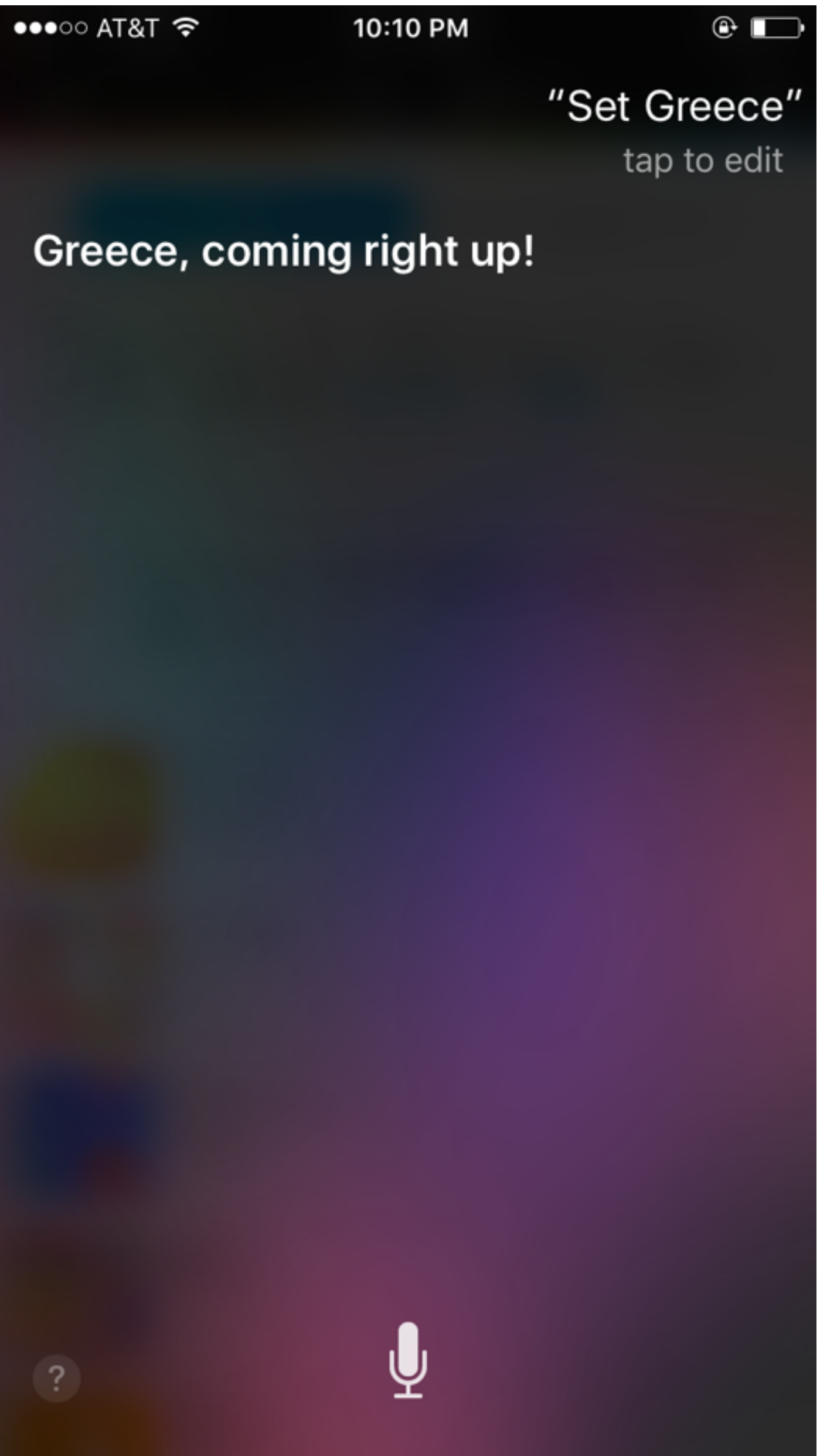
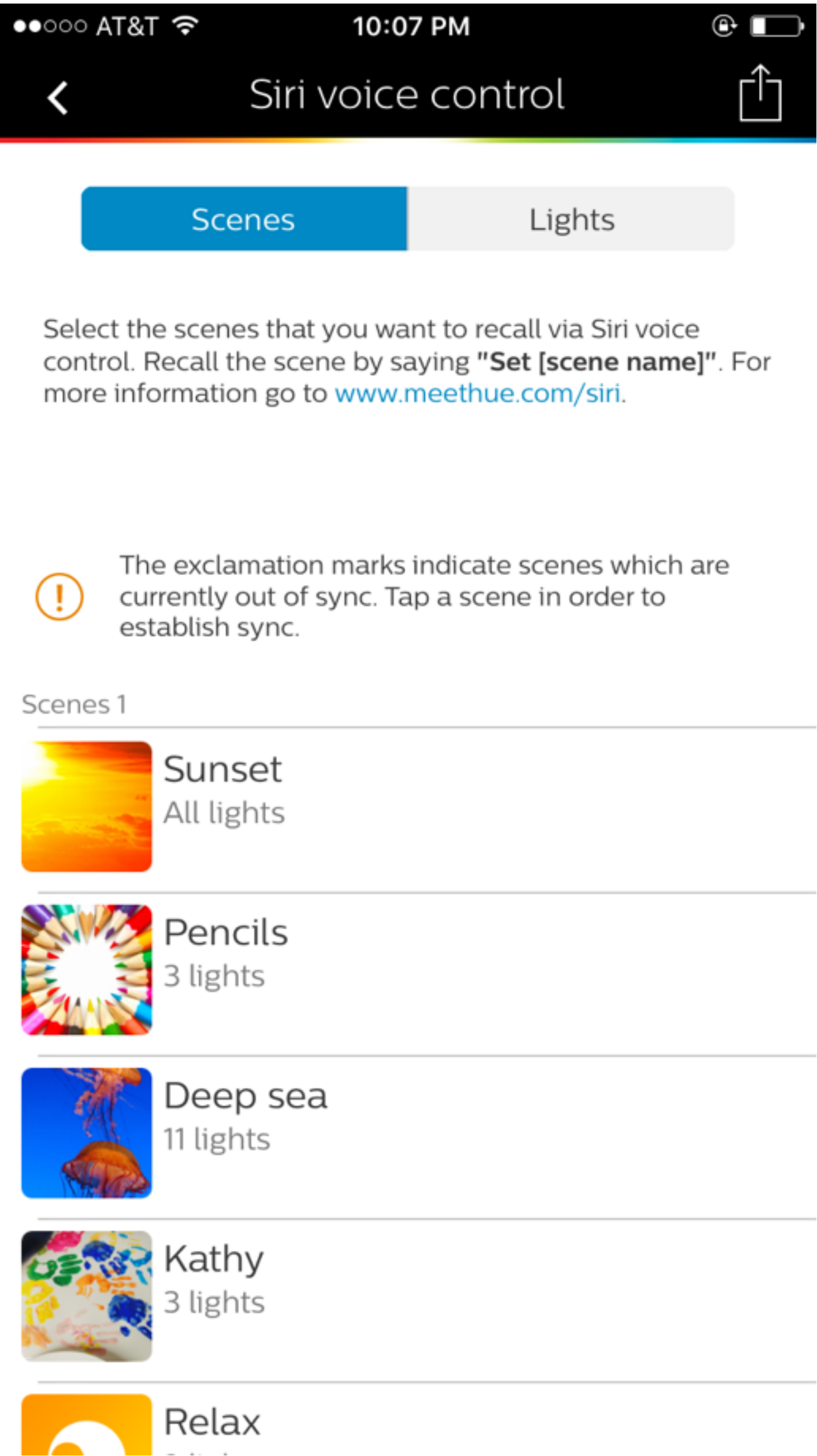
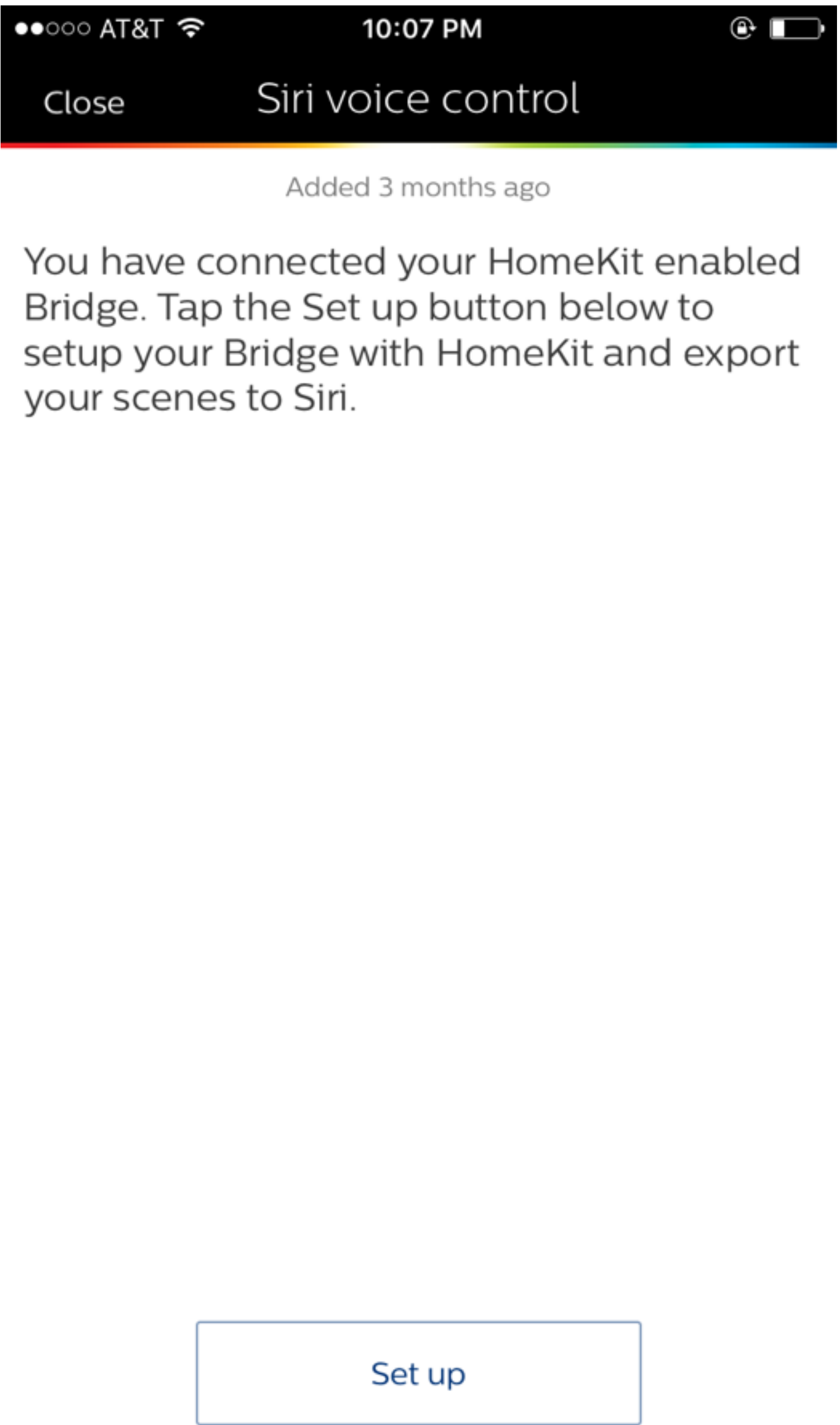
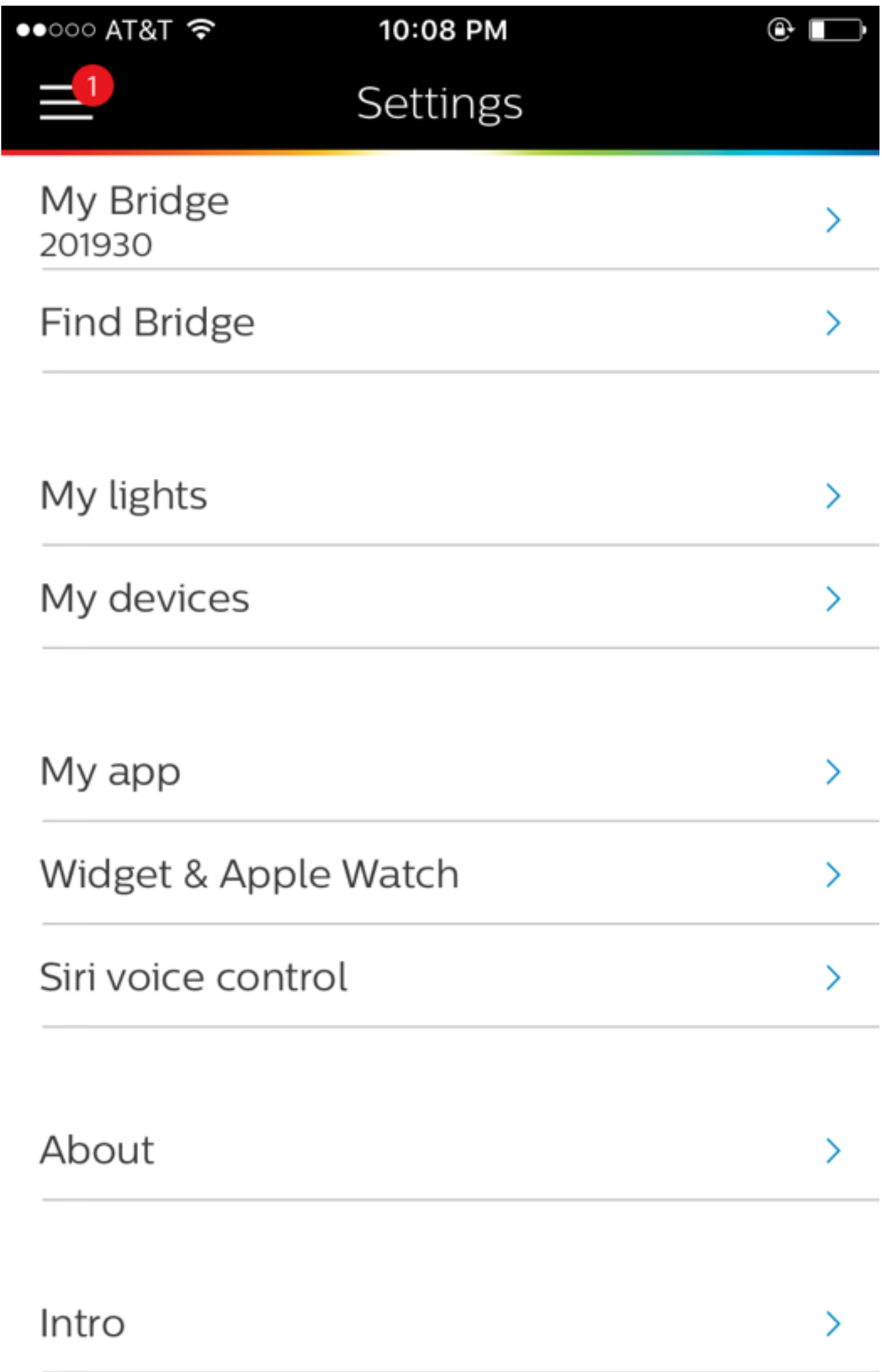
IOT & HOME AUTOMATION

- **HOMES** we should be so lucky!
- **ROOMS** living room in one home
- **ZONES** upstairs
- **SCENES** “party time!”
- **TRIGGERS** door opens and light goes on



THE PLATFORMS : HOMEKIT PLUS PHILIPS HUE

IOT & HOME AUTOMATION



THE PLATFORMS : HOMEKIT PLUS ELGATO EVE

IOT & HOME AUTOMATION

eve door & window 



 Open/Closed State

eve weather 




 Temperature  Humidity  Air Pressure

eve room 



 Air Quality  Temperature  Humidity



-  Consumption
-  Switch On/Off
-  Gain Insights

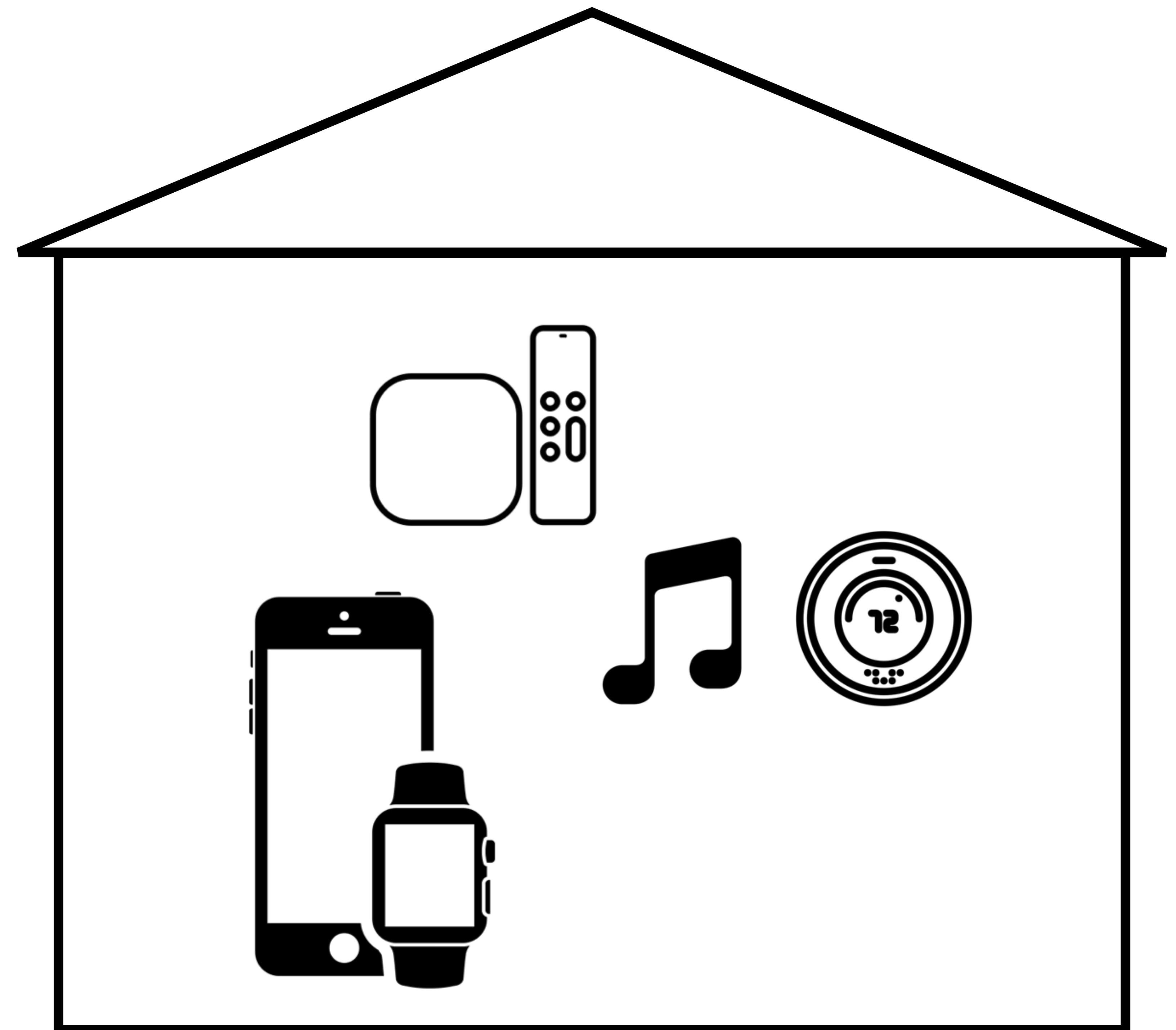
eve energy 



THE PLATFORMS: BRIDGES

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- **HOMEBRIDGE** Nest, Smartthings, Sonos
- **APPS** Indigo, manufacturer specific
- **IFTTT** recipes as triggers



THE PLATFORMS : NON-HOMEKIT

IOT & HOME AUTOMATION

wink

or

wemo

or

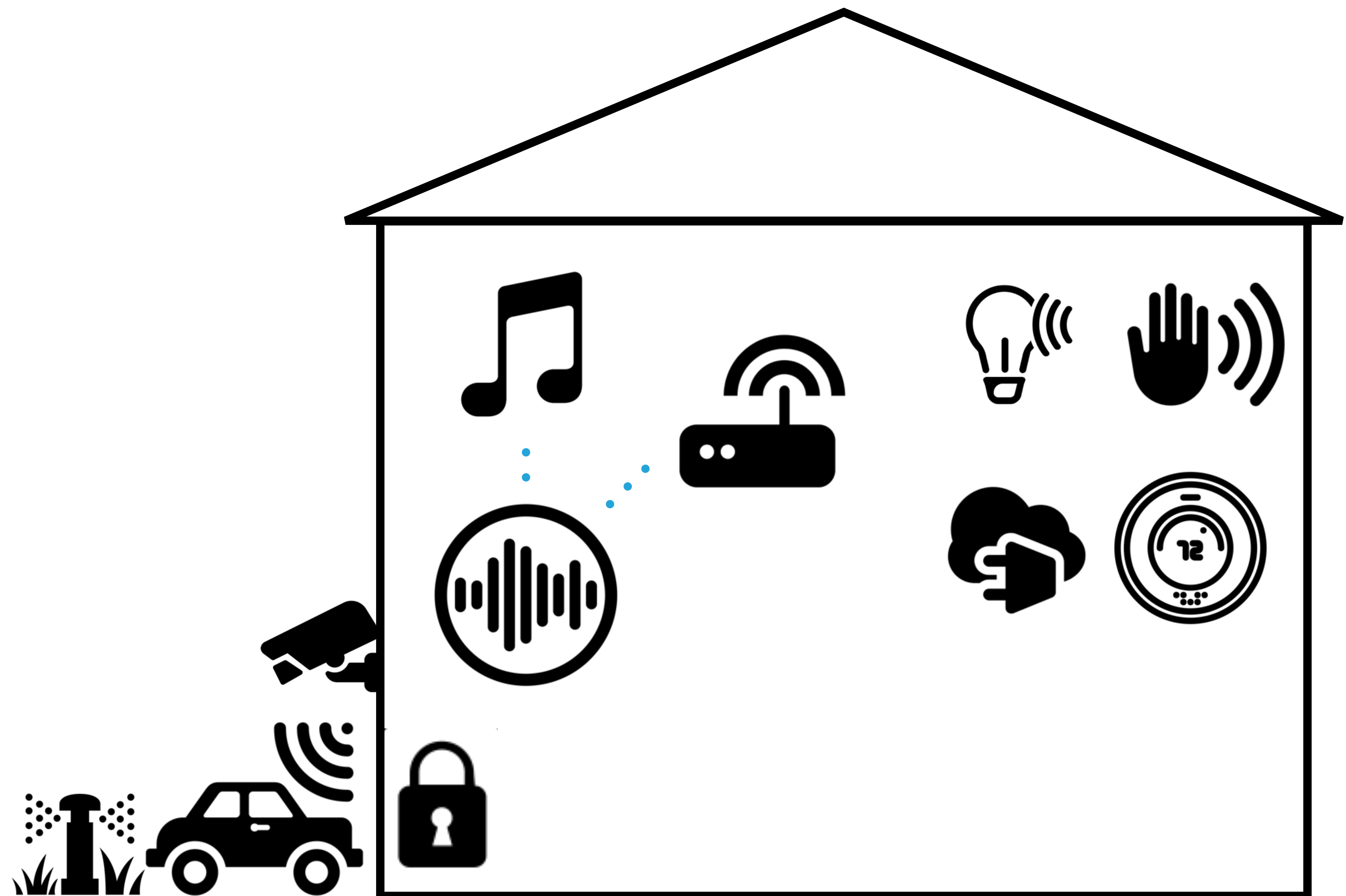
 **SAMSUNG**
SmartThings™

and

amazon echo

Google Home

MACTECH
PRO EVENTS



THE PLATFORMS : AMAZON

IOT & HOME AUTOMATION

- VOICE RECOGNITION SPEAKER
- INTEGRATION
- INDEPENDENT OF PHONE
- CENTRAL SYSTEM
- GROWING ECO SYSTEM



THE PLATFORMS : GOOGLE

IOT & HOME AUTOMATION

- **WEAVE** Linus Lock
- **BRILLO OS** Android-based for smart home devices
- **NEST** Nest Weave (proprietary protocol) app, cameras, thermostats and detectors
- **OnHub** more than a router
- **COMPATIBLE SMART TECH** Mercedes Benz



THE PLATFORMS : Google

IOT & HOME AUTOMATION

- VOICE RECOGNITION SPEAKER
- CHROMECAST
- CLOUD-BASED APPS
- COMING LATER THIS YEAR



Google Home

THE PLATFORMS

IOT & HOME AUTOMATION

- INTEGRATORS
- ZIGBEE & ZWAVE
- AUTHORIZED DEALERS
- FULL SOLUTIONS
- EXPENSIVE



RETAILER NETWORKS

IOT & HOME AUTOMATION

- **APPLE** Philips Hue Bridge, Lutron
- **AMAZON** Echo, SmartThings, Wink Hub
- **HOME DEPOT** Insteon, Lutron, Nest, Hue, SmartThings, WeMo, Wink
- **INTEGRATORS** Control 4, Crestron

GOING FORWARD

IOT & HOME AUTOMATION

- HOMEKIT
- AMAZON & SONOS
- GOOGLE
- SAMSUNG
- A RACE TO HORIZONTAL INTEGRATION

IOT & HOME AUTOMATION

Q&A and your success stories

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