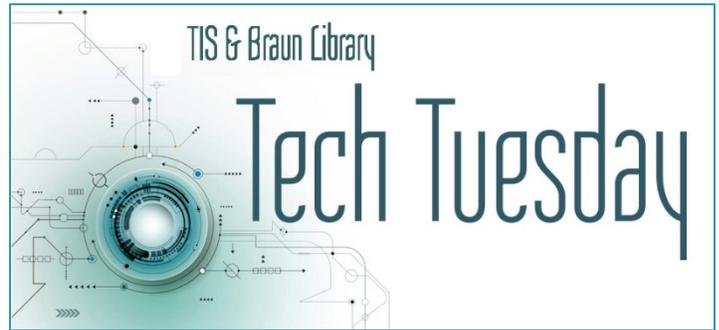

IoT

The Internet of Things



WHAT IS IT?

Suppose your refrigerator used RFID tags to detect what products it contained and how old they were. Linked to the Internet, it could automatically reorder new supplies as needed.

Suppose similar technology were being used to monitor elderly or disabled people so they could continue to live safely, with independence and dignity, in their own homes? It's easy to build a home that uses motion sensors to monitor when someone is regularly walking around, and not much harder to monitor that data remotely. That's a much more persuasive example of how the Internet of Things could prove helpful to a society with a rapidly aging population.

Thanks to the Internet, it's easy to set up virtually any electric appliance in your home so you can control it from a Web browser anywhere in the world. And, before much longer, all kinds of net-connected machines will be talking to one another, running much more of our lives automatically through the Internet of Things.

WHAT IS SMART HOME TECHNOLOGY?

SMART home technology use devices connected to the Internet of Things to automate and monitor in-home systems.

It stands for **S**elf-**M**onitoring **A**nalysis and **R**eporting **T**echnology.

SMART home technology allows users to control and monitor their connected home devices from SMART home apps, smartphones, or other networked devices. Users can remotely control connected home systems whether they are home or away. This allows for more efficient energy and electric use as well as ensuring your home is secure.

SMART home technology contributes to health and well-being enhancement by accommodating people with special needs, especially older people.

WHAT IS A SMART HOME?

A smart home is one in which the various appliances are wired to a control system so they can be switched on and off at certain times or if certain events happen.

Most homes already have a certain amount of "smartness" because many appliances already contain built-in sensors or electronic controllers. Virtually all modern washing machines have programmers that make them follow a distinct series of washes, rinses, and spins depending on how you set their various dials and knobs when you first switch on.

If you have a central heating system, most likely you also have a thermostat on the wall that switches it on and off according to the room temperature, or an electronic programmer that activates it at certain times of day whether you're in the house or not.

Maybe you're really hi-tech and you have a robotic vacuum cleaner that constantly crawls around your floors sweeping the dust?

These things are examples of home automation, but they're not really what we mean by a **SMART home**. That concept introduces centralized control. In the most advanced form, there's a computer that does what you normally do yourself: it constantly monitors the state of the home and switches appliances on and off accordingly. For example, it monitors light levels coming through the windows and automatically raises and lowers blinds or switches the lights on at dusk. Or it detects movements across the floor and responds appropriately: if it knows you're home, it switches light and music on in different rooms as you walk between them; if it knows you're out, it sounds an intruder alarm.

WHAT ARE SOME EXAMPLES OF SMART HOME DEVICES?

- Appliances
- Lighting, smart lightbulbs
- Thermostats
- TVs
- Computers
- Entertainment systems
- Webcams
- Sprinklers & irrigation systems
- Window coverings
- Wireless speaker systems
- Home security & monitoring
- Domestic robots
- Smoke/CO detectors
- Home energy use monitors
- Door locks
- Refrigerators
- Laundry machines
- Garage door openers
- Health & fitness devices
- Baby monitors

WHAT ARE THE PROS AND CONS OF SMART HOME DEVICES?

PROS

- Convenience. All your products will be programmed to your needs.
- Customization. You can include as many or as few of these products as you choose.
- Security. SMART homes are well-known for their improved security.
- Ease. It's quick and simple to install these systems.
- Environmentally friendly. Thermostats, air conditioning, and lighting can be controlled for optimal energy efficiency.

CONS

- Cost. Some SMART products can be expensive.
- Learning. There may be some learning curves for non-tech savvy people.
- Reliability. SMART homes rely on your Internet connection.

WHAT GOOD IS A SMART HOME FOR SENIORS?

Many elderly and disabled people struggle with simple household tasks. Home automation could allow them to live happily and independently in their own home. For example:

- People with dementia can have their homes fitted with automated sensors that check whether cookers have been left on or taps have been left to overflow.
- Elderly people prone to falling can have their homes fitted with lighting activated by motion sensors, so that if they get up in the middle of the night, they're not stumbling around dangerously in the dark
- Blind people can finally buy ordinary household appliances and use one simple computer controller, programmed to suit their personal needs, to manage them all.
- They can help reduce household energy bills by cutting the power to appliances such as washing machines, dishwashers, and TVs when they're not being used

PRIVACY CONCERNS

One big issue of concern is privacy. While companies that make devices that listen for commands (Amazon, Apple, Google) claim that they are not recording everything that goes on, more cynical people wonder if having a permanently "on" microphone in your house, connected to the Internet, is desirable. "Can it be hacked?" and "Is the NSA listening?" are questions that come up frequently. The issue is part of the general surrender of privacy in return for useful services that seems to be common today. It's a tradeoff.

WHICH ASSISTANT?

Which personal assistant is the best? Well as always with these things, there isn't an easy answer and it depends what you are looking for to suit your needs.

Google Assistant is very impressive. It can handle multiple queries at once, personalized results by recognizing a voice profile and it has the power of Google search behind it, making it very accurate. The wake words aren't very personal though, it isn't compatible with as many apps and services as Alexa and it isn't as funny as Siri.

Amazon Alexa isn't as dynamic as Google Assistant, or as smart, but it is compatible with hundreds of thousands of services and apps, the Alexa wake word is personal and customisable and it has features like Alexa Calling.

Apple's Siri is by far the wittiest of the personal assistants, the one that allows you to speak the most naturally and it offers features like Siri Shortcuts that make getting things done quick and easy, but it is tied into Apple devices and it offers less compatibility with apps and services compared to Alexa and Google Assistant.

Each personal assistant has its pros and cons. If you want the smartest, you'll want a device with Google Assistant. If you want the most compatibility with apps and services, you'll want a device with Alexa. If you want the funniest, you'll want an Apple device for Siri.

Bear in mind, if you have an Android or iOS phone, you can download the Google Assistant app and Alexa app from the App Store or Google Play Store. As mentioned, Siri is only available to Apple users so if you have an Apple device, you can pretty much have your cake and eat it with access to all three assistants.

ALEXA SKILLS

CHECK THE WEATHER

Immediately get an update on the weather without having to wait for it to show on the weather channel or checking it online. Just ask, "**Alexa, what's the weather?**" for the current weather and "**Alexa, what is the forecast for tomorrow?**" to find out what the weather will be in the future. You can use ask for any day, date, or time.

KEEP TRACK OF LISTS

Start by saying, "**Alexa, create a list.**" Alexa will then ask you to name the list. Then say, "**Alexa, add an item to my [list name] list**" and then say the item to add. To remove something, follow the same steps but say "remove." When you want to know what's currently on a list, simply ask "**Alexa, what's on my holiday gift list?**"

GET THE DATE AND TIME

You no longer need to strain your eyes to read the calendar hanging on the wall or walk over to the kitchen to get the time off the microwave. Say, "**Alexa, what is today's date?**" and "**Alexa, what time is it?**"

MANAGE YOUR CALENDAR

Putting plans up on your calendar is simple. Say, “**Alexa, add an event to my calendar**” and give the name of the event along with the date and time when prompted. To hear your upcoming schedule, ask, “**Alexa, what’s on my calendar?**” To delete an event you can say, “**Alexa, delete my doctor appointment from my calendar.**” Reschedule an event by saying, “**Alexa, move my doctor appointment from Thursday at 12:30 pm to Friday at 10:15 am.**”

SET MEDICATION REMINDERS

Using Alexa to set medication reminders. Say is “**Alexa, remind me to take my medications every day at 9 am.**” If you have multiple medications that need to be taken at different times, then you can set reminders for each medication. You can also set reminders for other things, such as: “**Alexa, remind me to feed the dog at 7 pm every day.**” “**Alexa, remind me to water the houseplants every Wednesday at 8 am.**” Need a reminder of your reminders? No problem! Just say, “**Alexa, what are my reminders?**” Alexa will announce them out loud.

SHARPEN YOUR MIND WITH TRIVIA GAMES

Alexa is great for playing fun trivia games that offer your mind an entertaining challenge. Brain teasers can help keep your mind quick and even delay the cognitive effects of aging. Games like **Question of the Day** and **Jeopardy!** are very popular (and free!). There are also several other trivia and puzzle games that you can find in the Alexa skills database.

LISTEN TO AUDIO BOOKS

If you have a subscription to Audible, you can have Alexa play your Audible books for you. Just say, “**Alexa, play the Audible book ‘Moby Dick’**” and that’s it! Alexa can even read books from your **Kindle**. Say, “**Alexa, play the Kindle book ‘The Odyssey’**” and Alexa will read the book for free. You can also ask Alexa to pause, resume, jump to the next chapter, etc. If you missed something just say “**Alexa, go back**” to rewind the book to the last paragraph. You can also say “**Alexa, go forward**” to skip ahead to the next paragraph.

PLAY MUSIC

In the mood for some music? If you have a subscription to a music services such as Amazon’s, Apple’s or Spotify’s you can have Alexa play music. You can ask Alexa to play specific artists, albums, songs, genres, and stations. For example, say “**Alexa, play The Beatles**” or “**Alexa, play the Blues.**”

HEAR THE LATEST NEWS

Keep abreast of the latest breaking news without having to sit through filler content on cable news channels or sifting through stories online. All you need to do is ask “**Alexa, what’s the news?**” and you’ll hear a briefing of the most recent news headlines. You can customize your news sources and create your own “Flash Briefing” that Alexa gives you.

STAY FIT AND EXERCISE

Add skills like 7-Minute Workout to follow daily exercise routines. When you're ready to break a sweat you just need to tell Alexa to launch the program: **"Alexa, start 7-minute workout."**

ALERT SOMEONE WHEN YOU NEED HELP

The **Ask My Buddy** skill lets you tell Alexa to contact a loved one. You just need to enter the phone numbers of your contacts and you're all set. If you need help, say **"Alexa, ask my buddy to send help"** and your contacts will receive alerts.

Note: Ask My Buddy is not a substitute for 9-1-1. In the event of a true emergency, be sure to contact 9-1-1 immediately.

GET YOUR DAILY DOSE OF ENCOURAGEMENT

Want a surefire way to wake up on the right side of the bed? How about a little encouragement to get your mood on a positive track in the morning? Enable the Daily Morning Affirmations skill for your Echo device and Alexa will share a word of encouragement. Say **"Alexa, open Daily Morning Affirmations"** and make your selection from there. Start your day off right!

SAFELY FIND YOUR WAY AT NIGHT

Nighttime trips to the bathroom can become a dangerous proposition without some light to safely illuminate a clear walking path. Rather than fumbling around in the dark for a light switch or a flashlight, use your Echo device as a night light. Enable the Night Light skill in your Amazon Alexa account to create a night light out of your Echo devices. Say **"Alexa, open Night Light"** and the light on top of your Echo device will illuminate. And say **"Alexa, stop"** to turn the light back off.

VOICE CONTROL OTHER DEVICES AT HOME

As technology has advanced so has the ability to create a Smart Home through interconnected devices and automation. Amazon Echo and Alexa act as the engine that allows you to control household devices with simple voice commands. Use Alexa to:

- Run the vacuum robot
- Control lights and change their color
- Operate your television
- Adjust the temperature on the thermostat
- Control your home security system

ALEXA EASTER EGGS

In computer software and media, an Easter egg is an intentional inside joke, hidden message or image, or secret feature. Here are a few of the many Easter eggs built into Alexa to try.

- Alexa, are there UFOs?
- Alexa, beam me up.
- Alexa, can you fly?
- Alexa, can you give me some money?
- Alexa, can you pass the Turing test?
- Alexa, do you have a boyfriend?
- Alexa, do you love me?
- Alexa, E.T. phone home.
- Alexa, go ahead, make my day.
- Alexa, how are babies made?
- Alexa, how do i get rid of a dead body?
- Alexa, how much do you weigh.
- Alexa, how old are you?
- Alexa, I'll be back.
- Alexa, inconceivable.
- Alexa, live long and prosper.
- Alexa, may the force be with you.
- Alexa, open the pod bay doors.
- Alexa, rap for me.
- Alexa, roses are red.
- Alexa, see you later alligator.
- Alexa, self-destruct.
- Alexa, show me the money.
- Alexa, stupefy.
- Alexa, testing ...
- Alexa, use the force.
- Alexa, what is best in life?
- Alexa, what is the loneliest number?
- Alexa, what is the meaning of life?
- Alexa, what is the prime directive?
- Alexa, where are you from?
- Alexa, who is better, you or Siri?
- Alexa, who you gonna call?
- Alexa, why did the chicken cross the road?
- Alexa, why do birds suddenly appear?
- Alexa, will pigs fly?
- Alexa, supercalifragilisticexpialidocious.