#TECH: Transforming everyday life with technology

By Nur Zarina Othman - December 19, 2022 @ 11:42am

BHS Home Appliances' Home Connect system offers connectivity for 35 brands.

The Internet of Things is helping to make life easy and manufacturers are going all out to ensure that the technology is accessible to everyone

WOULDN'T it be a dream come true to wake up to the smell of fresh coffee every morning and find a cup automatically brewing on the expresso machine just the way you like it?

At the same time, you also get your daily dose of news and social media updates from a faithful virtual assistant named Alexa while getting ready for work. She's always with you 24/7 — in your smartphone, car and home devices.

And yes, Alexa does reminders too, giving you a hint on how your day would look like. This way, you'll never miss or forget anything — not even a change of clothes for your after-work get together.

It is also a dream for people to come home to a clean house after a long and tiring day at work, and not having to worry about dinner as it is being automatically cooked in the kitchen.

Just tell Alexa what are you fancy, and if she doesn't have the means to prepare it, she'll just place an order for delivery from your favourite restaurant.

Then, when you hit the shower, the hot-water system just seems to know how to mix the right temperature for your body, ensuring that you have a refreshing bath.

And as you hop onto bed and get ready to call it a night, the lights in your bedroom start to dim gradually without you even flipping a switch.

And that "smart" energy-saving air-conditioner sets a cozy environment which will send you drifting to slumberland, so you can wake up fresh and repeat the cycle of life.

Wouldn't it be great if all those advanced automation features become affordable and applicable in our everyday lives?
They will certainly make life more pleasurable.

MACHINE INTELLIGENCE

It has been a few years since we first heard about this domestic technology that paves way for "smart homes", allowing home appliances to synchronise with each other and controlled by the homeowner via the Internet.

This convenience becomes possible as appliances are created with self-learning abilities, which can function according to the homeowners' schedules and make adjustments. We know the technology is available, but first, let's understand how the Internet of Things, or better known as IoT, works.

Machine-learning and artificial intelligence are two technologies that play an important role in the development of the IoT.

It involves extending Internet connectivity beyond standard devices — embedding traditionally "dumb" objects with technology to communicate and interact with each other over the Internet.

An IoT device is essentially a mini-computer that sends information to the cloud to be shared with other devices so they could all perform their functions.

MAKING EVERYTHING SMART

There's no denying that IoT home applications are useful. Besides making life comfortable, they allow smart homes to be energy-efficient, operate at low cost, and function in a sustainable manner.

How else could Amazon sell more than 100 million Alexa-enabled devices? The virtual home assistant has been integrated into more than 150 devices. The most

common smart-home devices are either built to operate with Amazon Alexa or Google Nest.

However, not everyone can afford a complete home system upgrade as smart-home systems are constantly evolving and can be costly to install.

In this regard, Xiaomi has become one of the most sought-after IoT brands because of its affordable products. The affordability factor allows everyone to experience the convenience of life offered by smart devices.

By 2020, the company had grown to become the largest consumer IoT producer. It has been launching home appliances and devices that can be linked and controlled by its smartphones, such as television sets, air-conditioners, bedside lights, rice cookers, light fixtures, doorbells and, most recently, pet feeders.

Today, all products within the Xiaomi product ecosystem can be connected and controlled seamlessly through the Xiaomi Home app.

BRINGING IT CLOSER

Some of our daily activities may have grown tiresome as our pace of life quickens, but some issues can be solved at home with connected appliances.

"We have seen many Malaysians transitioning and transforming their everyday lives with technology, and they have been anticipating for more smart-home products to be available here," said Nicolas Shi, Xiaomi's country manager for Malaysia and Singapore.

He added that the company was seeing an increase in demand for smart-home products and it was Xiaomi's utmost desire to make smart living available to all Malaysians.

"We hope more Malaysians can experience smart-home living with our IoT products. At Xiaomi, we believe that innovation is for everyone, and we strive to offer our users the latest technology, yet ensuring they are sold at an affordable price," he said.

BSH Home Appliances Malaysia (Bosch) recently introduced its Home Connect system for the Malaysian market. The platform allows users to connect and communicate with Bosch's collection of connected appliances to "automate" household tasks.

"With Home Connect, the brand offers connectivity for large home appliances with the purpose of helping our consumers get the best out of their appliances," said BSH Home Appliances Malaysia chief executive officer Gary Te.

THE EVOLUTION OF CONNECTIVITY

Connectivity is a critical component of the IoT. Traditionally, IoT devices are connected through a local Wi-Fi network or directly paired with Bluetooth.

All devices in a smart home must be connected to the same Wi-Fi network to communicate with other devices and synchronise their functions.

As connectivity evolves and smart devices become smarter, an increasing number of technology companies are exploring a much broader connectivity in establishing better "communication" between users and their devices.

Taking a step further, BSH Home Appliances has also included other brands' products into its application to ensure connectivity doesn't stop with its own collection.

As the only cross-brand solution currently available in the market, the Home Connect platform allows users to control, monitor and remotely manage connected home appliances, including those from Siemens and Gaggenau.

Te said that increased connectivity in the ecosystem will allow users to "constantly improve their lives with digital features and services supported by our large partner ecosystem of more than 50 Home Connect partners globally".

INCREASED SECURITY

As more devices become connected through the Internet, security concerns rise.

Just like Internet safety, the concern with IoT remains the same — are we giving up our home's security by embracing smart-home technology?

The Sonos S2 OS and controller app, for example, is more than just a software that controls the functions of a smart home. It's a platform that combines all of your streaming, voice and control services, allowing you to easily browse music, radio, podcasts, and audiobooks and listen in your own style.

This way, you can "speak" from anywhere in your house, telling it where you are and what or how you want to hear, and it will respond.

The brand did not stop at just alleviating your listening experience. It understands security vulnerabilities and ensures that the connection doesn't become a nuisance to its users.

Equipped with enhanced protocols, the Sonos app includes support for elliptic curve cipher suites in SSL/TLS — keeping your system safe and your data secure.

"One of the most natural ways to connect to your music is with your voice, but when we speak to our customers, we hear that privacy concerns mean many are choosing not to use voice control.

"Created purely for listening in Sonos and designed with privacy at its core, Sonos Voice control delivers the Sonos app experience using only your voice," said Sonos voice experience vice-president Joseph Dureau.

He added that no audio transcript would be sent and stored in the cloud, which might be compromised by hackers.

DREAMS DO COME TRUE

Good news is, the perfect-life dream mentioned earlier is slowly becoming a reality.

"One of the best features the Home Connect has is that users don't need to be connected to the same Wi-Fi network like other applications.

"All you need to do is to make sure they (the appliances) are connected to the Internet and they can be managed from anywhere around the world, literally," said Te.

"If you suddenly remember something while abroad, but you have the Internet and can access the Home Connect app, you can communicate with all the devices in your home.

"You can put your refrigerator in holiday mode if you're leaving for a few days to save energy," said Te, adding that the best part of having connected appliances at home was that you don't even need to remember to change the settings.

"Imagine the time when you don't have to wait for your morning coffee because it will be there for you. You can sleep in later and wake up to a fresh cup of coffee (of your choice) when you need it.

"Now, even when your unexpected guests are on their way to visit you, the Bosch coffee machine prepares drinks based on individual preferences and makes it once they arrive. If this is not convenient, I don't know what is," said Te.