
CES 2018

THE HIGHLIGHTS

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It's that time of year when startups, big tech, journalists and technophiles converge on Las Vegas for the annual Consumer Electronics Show.

Traditionally, CES consists primarily of three areas: cars, displays and weird (and often gimmicky) gadgets. This year was no exception, but a fourth area was added to the mix: voice.

This was the first year that Google exhibited at CES, and it overwhelmed crowds with its Google Assistant presence. It wrapped Vegas' monorail, built a house with a multi-story slide and even had giant gumball machines. It was also featured in practically all categories of hardware, a clear shot across the bow at Amazon Alexa.

CES has often been labeled as a car show, and this year automation and EV were the big selling points for vehicles, supported by virtual assistant integration. Most of these are concept cars that never hit production, however this year's models went beyond the concept car and into entirely new forms of transportation.

From beer-fetching robots to hip airbags, CES had a plethora of weird and wonderful gadgets to solve every 'problem' - even those you didn't know you had. Of course, it wouldn't be CES without a smart fridge or three.

With more than 4,000 exhibits, we've done our best to distil the show into a few pages for you to digest. Enjoy our highlights!



Robert Tilt
Head of Innovation
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ON DEMAND RETAIL EXPERIENCE



SMART CARS

Autonomous vehicles were everywhere at CES - both inside and outside of the exhibition. The biggest show-stopper was **Toyota's e-Palette**, above. The e-palette is positioned as a 'mobile hub' that can be tailored to a variety of needs. Less a concept car and more a new type of vehicle entirely, the e-Palette comes in three sizes, and Toyota wants them on the road in time for Tokyo's 2020 Olympics. Interestingly, they're joining with Uber, Didi (China's Uber alternative), Mazda, Pizza Hut and Amazon to bring it to life. A mini version of this mobile hub idea was the **Robomart**, a fresh-food mini-mart that is fully autonomous and drives to you.



Byton EV

In more consumer-focused concepts, vehicle sharing was a prominent focus with **Daimler's Smart Vision EQ** and the French **Navya**, a small shuttle bus that was active on Las Vegas' streets.

On the EV front, the biggest disruptor was a concept from Chinese car company **Byton**. The SUV's biggest feature was a display that covered the entire dashboard, as well as another within the steering wheel itself.



Navya

Powering a lot of this self-driving technology was **Nvidia**, once purely a gaming chipset manufacturer, who now the majority of their growth from vehicles.

Now or later?

Nobody expects any of these vehicles on our roads within the next couple of years, but these concepts are just as much a brand demonstration of innovation as a litmus test for customer sentiment.



DISPLAYS

Display technology is always a major feature at CES, and this year is no exception. What's important to note is that while there's often a direct pathway from CES to the consumer (with about a two year transition), a lot of the display technology is shown by the non-retail arms of companies. For example, LG Display are separate to LG Electronics, and actually sell their displays to Sony as well.

The biggest player in displays is undoubtedly **Samsung**. Their flagship product for the show was **The Wall**, a 'MicroLED' panel that spans an incredible 146 inches (370 cm). Furthermore, the panel is claimed to be modular, which may mean it's simply custom made to measure.

Alongside their gorgeous OLED displays, **LG Display** showed off their **Rollable TV** prototype. The first of its kind, this has the potential to reinvent how we think of televisions within our living spaces. As of yet, there's no buyer for this technology.



Not to be outdone, **Sony** also featured a unique product: a A\$37,000 projector. Beaming in 4K, this projector - which is self standing and has built-in speakers - sits only 25 cm from the wall, and projects an image up to 300 cm in diameter.

Now or later?

Most display technology shown at CES takes about two years to hit production. The exception is with some of the concept products, such as The Wall, which are destined for specialist suppliers only.



DIGITAL ASSISTANTS

Google Assistant tried to take over Las Vegas for CES. They had a presence throughout the convention centre, partnered with countless hardware manufacturers, and were visible throughout Las Vegas with their massive advertising spree. Nobody could avoid Google's presence, and Assistant's awareness is at an all time high because of it.

It seems that all TVs are destined to have built-in voice recognition capability.

LG Electronics has partnered with Google, **Hisense** with Alexa, and **Samsung** has created its own assistant with **Bixby**.

Outside of TVs, Google Assistant and Amazon Alexa were present in countless devices, ranging from speaker-and-screen combinations from **JBL** to light switches by **GE**. Auto was no exception, with Assistant now properly integrated with Android Auto. **Kia** took this one step further, integrating Assistant into its UVO infotainment system, enable voice to control its cars' ignition, locking, horns and lights.

However, more competition does not mean faster progress. Outside of Alexa and Assistant, voice technology is less advanced. The worst example was LG's appliance-based assistant **CLOi**, which continually failed to acknowledge LG's VP of Marketing during his keynote.

Now or later?

The time is now. Alexa practically won CES last year, and while it was still present in 2018, Google took the crown with its domination of the event. Expect assistants to be unavoidable within the next 12 months.



MIXED REALITY

After such a public focus at last year's CES, there was no way VR could back it up this time around. As such, VR had a much smaller presence at this year's show, but there was still product iteration. The **Pimax 8K**, above, featured an outrageous 200 degree field of view. **HTC** announced the **Vive Pro** with a 75% higher resolution and an accessory to entirely untether the headset from cables.

While there was less VR to be seen on the showfloor, AR had strengthened its presence to fill the void. With Apple and Google both creating AR SDKs on their platforms, the consensus is that AR is a more accessible medium, and will have a far greater impact with consumers.



Vuzix Blade

The **Vuzix Blade** is a set of AR glasses that can be thought of as a spiritual successor to Google Glass. It has the same touch controls as Glass and looks more like actual glasses. However, it also has Alexa built-in for voice control.



Realmax prototype

One of the geekier devices at the show would have to be the **Realmax** prototype. It looked like a bunch of devices crudely strapped together, however its field of view is around 100 degrees, far greater than Microsoft's HoloLens (at only 35 degrees) which is the leading product in the category. It's also coupled with a Leap Motion to enable gesture recognition.

Now or later?

It's highly doubtful that any form of head mounted display (HMD) will become mainstream in the next three years, but these products will be continually released and improved for niche audiences.



ROBOTS

Robots had a surprisingly strong presence at CES this year. Some robots were general purpose: **Ubtech's Walker** is a small armless humanoid robot 'butler' for the home, and **Aeolus** is a general household keeper which can vacuum the floor (with your actual vacuum) and even grab you a beer from the fridge.

However, many more robots were dedicated to extremely specific uses. The robot pictured above, by Taiwanese research company Industrial Technology Research Institute (**ITRI**), is designed purely to play Scrabble. It performed that well though, and appeared to trounce any human who challenged it.



Ubtech Walker

Segway made an appearance, with a small two-wheeled robot that can be ridden like a hoverboard and follows you like a puppy. Speaking of puppies, **Sony** showed off its latest **Aibo** robot puppy, now with voice commands and touch sensors to recognise petting.



Omron Forpheus

The most intimidating looking robot was actually a friendly ping-pong coach from **Omron**, which had facial recognition and is designed to teach and encourage.

Finally, there were two laundry-folding robots, the more advanced being the **Laundroid**, which when complete will sell for A\$20,000.

Now or later?

The smaller, cheaper robots on show will be available in the next year, with a couple available already. However, they're more toy than utility. Some niche robots may be released, but others will never see production.



GADGETS

Personally, this is my favourite part of CES. The show is cluttered with weird and wonderful gadgets, all hoping to find an audience. So many of these are novelties at best (do you really need a \$300 pet feeder?), but others are profoundly innovative.

Vivo have successfully built a phone with an in-display fingerprint reader, something that was beyond Samsung and Apple. **Sprint** partnered with **Dynamics Inc.** to create a multi-purpose battery-powered payment card, which can function as a debit, credit, prepaid, multi-currency or loyalty card - or all of them at once.



Time Machine Camera

A unique product for the sharing generation was **Roader's Time Machine Camera**. Worn like a necklace, it constantly records video. When you press a button it saves the last ten seconds of video - perfect if you missed capturing a moment.



Helite Hip'Air

Other devices we designed around inclusivity. **Euveka** is a mannequin for fashion designers that can morph into any variety of measurements. And finally, we have the **Hip'Air** from **Helite**. Designed for the elderly, it's an airbag for your hips. Of course, it's not inflated by default, and is normally a lightweight belt, but can detect a fall in only 0.2 seconds.

Now or later?

The gadgets above are only a tiny taste of what was on show, but they're further along in their product lifecycle. All are destined for production within the next 18 months.

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