

Voice of the people

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Amazon Echo Dot

More and more people are switching on to how the smart home can make their lives easier and voice control is fast becoming mainstream. **Jamie Carter** reports

We need to talk about voice assistants. They're everywhere, with Amazon's Alexa and Google Assistant poised to revolutionise how consumers interact with electronics of all kinds.

The voice-based interface is here, and so far, it's smart speakers that dominate. "Wireless speakers have become a dominant force in home audio hardware, with shipments increasing more than 30 per cent in 2017," says Simon Bryant, director of research at Futuresource Consulting. "However, the real star of the show is the smart speaker sub-segment – introduced just two years ago.

Smart speakers have captured the imagination of consumers and are enjoying high levels of uptake."

In the second half of 2017, the number of smart speakers available on the market increased from just 10 to more than 40, but some think that this surge is only just beginning. "2018 is the year competition in this market truly begins – and the year true mainstream adoption accelerates," says Paul Erickson, senior analyst at IHS Markit. "We expect numerous third-party smart speakers built around one or more digital assistants, so consumers will have more choices when it comes to price, form factors, style, and audio quality."

The trend does seem to be towards wider voice compatibility. "Watch this space for speakers that support multiple voice platforms," says Mr Bryant, "allowing consumers to choose their

smart speaker based on the feature set rather than the voice platform it supports." For example, in a move that stresses the importance to some brands of open standards between ecosystems and 'walled gardens', the Sonos One will soon support both Alexa and Google Assistant.

Upgrades

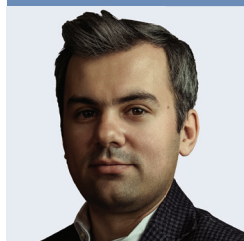
From 27 million units in 2017, 39m smart speakers are forecast to be shipped globally in 2018. Maplin reported just after Christmas that various Amazon Echo and Google Home products made-up four of its top-five selling products in the smart-home category. Alexa appears to be the most desirable, with 22 per cent of its customers hoping to purchase one in the next six months.

However, with the Amazon Echo and Google

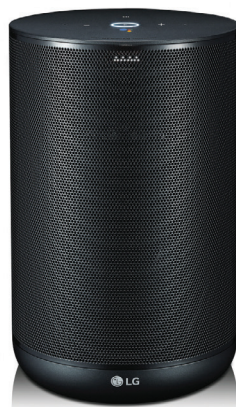
'True wireless' earbuds, the Sony WF-SP700N, are compatible with Google Assistant



Many experts have been calling 2017 the 'Year of Voice,' but 2018 will see voice make far bigger impacts on revenue



Sergey Bludov,
senior
vice-president,
media and
entertainment,
DataArt



LG's ThinQ Speaker deals in hi-res audio



Vobot Halo is a smart wake-up light with a voice-activated assistant

Home being fairly basic in terms of sound quality, one of the biggest segments could be smart speaker upgrades, as early adopters begin to fit out extra rooms with smart speakers. CES saw the debut of the LG ThinQ Speaker WK7, a voice-activated smart speaker developed with Meridian Audio that can output in 24bit/192kHz Hi-Resolution Audio and 24-bit up-sampling. It uses Google Assistant rather than Alexa, and also works as a smart-home hub, with a voice-activated interface for LG's other smart-home appliances.

Zoning in

Futuresource expects developed markets to reach saturation point for smart speakers by 2020, so how can electrical retailers capitalise on this growing opportunity?

In terms of the physical in-store experience, one obvious approach is to create a 'voice zone'. "Electrical retailers should create a dedicated area in their stores in which they showcase voice-assistant products as well as compatible ecosystem products, such as lights, connected plugs, and thermostats," says Jurjen Amsterdam, senior category manager for home systems at Harman EMEA. "This will allow customers to better understand all possibilities beyond audio playback over the voice-enabled speakers."

One immediate hurdle in selling the voice experience is trust. Many consumers will have experimented once or twice with a voice assistant on their smartphone, and laughed at the comical results. That was probably a few years ago when they were new on the scene, and rather basic.

"Customers are looking for a level of trust and reliability when it comes to adopting voice-control technology," says Jelmer Jonkman, product

marketing manager at Universal Electronics. "They've likely had a frustrating experience with voice technology in the past and so they want to know that the product they're about to spend their hard-earned money on is going to work straight out of the box."

If reassurance is vital at this stage of the voice-technology market, so is targeting the right kind of customer. Like who? "Those who suffer limitations in time or capability, such as busy professionals, the aged or disabled, and the exceptionally tech-savvy," says Edd Wilson, voice search expert at digital marketing company Impression.

It's also worth targeting older customers. Maplin reported that while 35 per cent of 25 to 34-year-olds currently own a smart-home product, and that while only 12 per cent of consumers over the age of 55 do so, 63 per cent of these older (and often wealthier) consumers are considering investing this year.

Mr Wilson at Impressions also thinks that retailers should understand the needs of customers, and tailor products accordingly, adding: "Amazon Echo is more reliant on shopping, so it would be suited for those who are primarily product-based, whereas Google is better at supplying information."

Different voices

And he makes an excellent point – not all voice assistants are equal. While Amazon's Alexa is the most recognisable and best-known voice assistant, Google Assistant is quickly catching up. There's also Apple to think about. Its HomePod product is due to go on sale in 2018. However, it's worth considering the quality of the brains behind the voices. "All voice technology is biased

towards the company – Google has the entire web database and Amazon's data is integrated with the biggest web store in the world," says Mr Wilson. Apple will therefore likely be heavily biased towards its own services, and not be of the same breadth as its rivals.

Google has even bigger plans. "As voice search continues to grow, I estimate that Google will turn its voice search into an auction place with adverts integrated," says Mr Wilson. "This will damage users' trust as it starts displaying ads in voice search over unbiased information and results."

If Google is playing the long game, it's easy to see why. "We're seeing rapid price erosion, as Google and Amazon draw the battle lines," says Futuresource's Mr Bryant. "Smart speakers are moving towards the \$100 sweet spot, used as loss-leaders to populate homes with what could become home retail terminals, linking consumers to a supply chain that opens the door to a range of services," he says. "The winner of today's smart speaker land-grab could be the owner of tomorrow's consumer."

Speak easy

This, of course, is all about the smart home, and who owns it. They may be talked about as smart-home 'hubs', but for most customers, smart-home products are isolated responses to a particular need. However, the advantages of voice control go way beyond the novelty of being able to play music hands-free. It allows faster access to information, and is proving more socially acceptable than constantly checking a phone during conversations.

"Beyond leisure activities, like music and video search and consumption, smart speakers >>

Voice Control

ANALYSIS



Should voice be an open platform? Sonos One plays nicely with both Alexa and Google Assistant



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The Lenovo Smart Display is one of four 'smart displays' set to be launched during 2018

5bn

Over five billion consumer devices supporting voice assistants will be in use in 2018, with almost three billion more added by 2021 (Source: IHS Markit)

make checking the news and weather, switching appliances and lights on and off, and controlling the heating all a little more entertaining,” says Mr Bryant.

It also appeals across the generations. Universal Electronics’ Mr Jonkman says: “Because the voice is such a natural form of communication, we are seeing people of all ages, including those from older generations – who might otherwise be averse to using new technology – using voice products frequently to make their lives simpler and easier.”

Voice control is also great for people with limitations or disabilities, for those without, or unwilling to operate, a computer or phone, and for kids. “A child won’t have to learn the functionality of a device to access a computer, they can just start communicating with it from as early as they can talk,” says Impressions’ Mr Wilson.

There also appears to be a trend for TVs and other displays to build-in voice control, with CES seeing the announcement of TVs from Samsung, LG and Hisense, as well Alexa-controlled projectors from Optoma and Acer.

“Being able to search for content via a TV user interface is a lot more fun, and a lot faster, when simply using your voice compared with a clunky remote control keypad, or an on-screen keyboard,” says Mr Jonkman. “We expect hands-

free voice remotes for televisions – voice control that doesn’t have to be activated with the pressing of a button on the remote control – to be the next big trend as we move into 2018 and beyond.”

He adds: “Ideally, the solution must be intelligent enough to realise when the user wants to activate voice control – and, just as importantly, when it doesn’t – by its own accord.”

Panasonic also showed off an Alexa-controlled Ultra HD Blu-ray player, the DP-UB820. CES saw a few pairs of ‘true wireless’ earphones embrace voice control – Sony’s WF-SP700N are compatible with Google Assistant, while the wireless Jabra Elite 65t and Elite Active 65t have Alexa built in.

Gateway products

The biggest advantage of voice control from the point of view of the trade is that it is proving an extremely effective gateway into the world of smart-home devices.

However, voice control is not yet the finished article. Expect numerous refinements and improvements to overcome some significant drawbacks. Voice search is limited to one command at a time and, for now, is not properly integrated into screens.

Another issue, particularly in Europe, is languages and accents. “This can very occasionally

cause problems for the technology, but with huge developments in natural language understanding taking place on an almost daily basis, it won’t be long before this problem is a thing of the past,” says Universal Electronics’ Mr Jonkman. Linked to that is that complex contracts with third-party services means that voice-enabled speakers are not available in every country yet, which could lead to grey imports.

However, the biggest drawback to the proliferation of voice control is that there are multiple ‘formats’. “There are currently at least three different voice platforms, which prevent a 100 per cent compatibility among all voice brands and products, which is a limitation,” says Mr Amsterdam at Harman EMEA.

“A ‘voice war’ is maybe not the right word, but both platforms aim for market leadership, and will do everything legally possible to create disadvantages for its competitor.”

Another quirk of voice interfaces is the ‘pass-through’ compatibility of Alexa/Google Assistant with manufacturers’ own voice-activated interfaces. For example, users of LG’s smart-home appliances need to say “OK Google, talk to LG, turn on the air purifier.” That’s a bit of a mouthful.

Having mastered the smart speaker, now comes the smart screen. It perhaps didn’t get as much



Google will turn its voice search into an auction place with adverts integrated. This will damage users' trust as it starts displaying ads in voice search over unbiased information and results



Edd Wilson, voice search expert at digital marketing company Impressions

Left: The Jabra Elite 65t wireless earphones are ready for Amazon Alexa

attention as it deserved at CES, but voice assistants integrated into 'smart displays' now looks set to be the next big thing. A screen ranged above a speaker, Amazon's recently announced Echo Show takes care of Alexa, while CES saw a trio of 8in or 10in smart displays announced for sale later in 2018 that all support Google Assistant – the LG ThinQ WK9 and Lenovo Smart Display. Sony and Harman/JBL are planning similar devices. Do consumers want a touch-screen device dedicated to a voice assistant? It does seem logical and if so, the tablet is dead. Long live the (slightly different) smart display.

Meanwhile, CES saw many other off-the-wall products build-in compatibility with voice assistants. The Vuzix Blade smart glasses, which include a camera, microphone and touchpad, take phone calls and allow the wearer to communicate with Alexa. The wearer sees the search results in the upper right of their field of vision. Flushed with success, Alexa can now operate Kohler's Numi intelligent toilet, and even tactically start-up a Moodo scent machine. There are also Alexa-powered smart showers from Kohler, Elmer and Moen, the Vobot Halo smart wake-up light, and the iDevices wall light switch (tipped by some as a potentially huge category).

Smart appliances

It's not just consumer electronics that are getting the voice treatment. At CES, Whirlpool added Google Assistant and the Amazon Alexa assistants to its Smart Front-Control Range of appliances, while Samsung went its own way by adding its own Bixby voice-control tech to its Family Hub



Samsung's FamilyHub fridge is now compatible with its own Bixby voice platform



The Harman Kardon Invoke is one of the few smart speakers compatible with Microsoft's Cortana voice assistant

Is Google Assistant catching up with Alexa?

Which intelligent voice assistant is better? That's a tricky question and one that isn't yet being asked much by customers, largely because Amazon's Alexa has been so dominant in the genre's first year or so. Helped along by the never-ending stream of Amazon Echo products coming from the online retailer-turned-tech giant – all the buzz is about Alexa.

However, there is another fast-growing voice assistant becoming more important in consumer electronics, white goods and more – Google Assistant. While many manufacturers' products are already compatible with Alexa, at CES it became a trend to at least be platform-neutral by allowing Google Assistant to also have a say. At the Central Plaza at CES was the Google Assistant Playground – a vast exhibition stand far bigger than any Google has brought to Las Vegas for some years. Visitors also saw 'Hey Google' advertising all over Las Vegas, even on the monorail.

As well as the search engine's own smart speakers, the Google Home, Mini and Max, the stand hosted a raft of new products compatible with Google Assistant. It was announced that Google Assistant would be available on new voice-activated speakers from Altec Lansing, Anker Innovations, Bang & Olufsen, Braven, iHome, JBL, Jensen, LG, Klipsch, Knit Audio, Memorex, Riv Audio and Solis. However, it's the recent strategic announcement that the Sonos One smart speaker will soon be compatible with both Alexa and Google Assistant that could be key.

Consumers can now also talk to Google Assistant via an LG and Sony TV, activated by microphones in the remote control, while Google's Android Auto hands-free system puts a similar functionality into vehicles. Google Assistant also looks set to be built into a new segment of 'smart displays' from LG, Lenovo, Sony and JBL, essentially like smart speakers, but with large touch-screens added.

That could mean that Google, not Amazon, gets to control many smart homes. This is a 'format war' that could run and run, but hopefully be less and less relevant in terms of product differentiation.

So what about Microsoft's Cortana and Apple's Siri? The only smart speaker of note that's compatible with Cortana is the Harman Kardon Invoke, and at CES the platform suffered a major snub when HP, Lenovo, Asus and Acer all announced that their upcoming Windows 10 PCs would include Alexa. Meanwhile, Apple's plans to release its HomePod product in 'early 2018' are looking increasingly unimportant.

Mr Jonkman concludes: "Apple likes to ensure any technology they're looking to adopt is 110 per cent market-ready before they actually do so, and so while it might play a big part in popularising voice-control technology, it won't be the company that leads the way and drives innovation forward."



Google Home Max is the search engine's premium smart speaker



Right: The Optoma UHD51A is one of the first voice-activated projectors

Below: 'Alexa, flush the toilet' is something Kohler's Numi smart toilet will be hearing a lot



smart fridge. Bixby will soon be able to distinguish between different voices.

LG unveiled its new SmartThinQ platform, which it claims uses artificial intelligence. Operating on SmartThinQ is its InstaView ThinQ Smart Refrigerator, a new flagship fridge with a 29in touch LCD display, and a two-megapixel PanoramaView camera that sends a feed of the interior to the SmartThinQ smartphone app. Like a smart speaker, the InstaView also plays music, hunts for recipes and stores shopping lists courtesy of built-in Alexa. However, LG is hedging its bets. It also showed-off an unnamed top-loading washers and dryers that use voice commands via Google Assistant.

"Many experts have been calling 2017 the 'Year of Voice,' but 2018 will see voice make far bigger impacts on revenue," says Sergey Bludov, senior vice-president of media and entertainment at global technology consultancy DataArt. He thinks that a 'voice user experience' has huge potential to become the de facto way we interact with electronics, and that 2018 will see more of a focus on 'skills'. This is where a voice assistant exerts control over a third-party device, usually a smart-home gadget.

"Now that Google Assistant and Alexa are openly accessible to third-party developers, the software, not the hardware, will largely determine success in the market of voice-activated technology," says Mr Bludov. Alexa currently has 15,000+ skills, and among other things can control Philips Hue smart bulbs, control a Nest thermostat, play music from Spotify, order a pizza from Domino's or call

Uber. The Google Assistant has fewer skills, largely because it's younger, but it can still talk to most of the same things.

A good shout

One thing is for sure – voice control will develop and increase its reach in the years to come. "The market for voice-controlled speakers will continue to grow rapidly, with more and more customers adopting the technology, and products becoming available in more and more countries," says Mr Amsterdam at Harman EMEA. "Voice-assistant technologies will most likely lose some of their current uniqueness, as competing technologies will copy each other's strong value propositions."

However, as the market matures, sales could increase sharply. "The falling price point is resulting in high levels of multiple ownership," says Futursource's Mr Bryant. "It's far more pronounced than we've seen for any other audio device... smart-speaker households are likely to own two or more devices, not least because bridging devices are available at cheaper price points and the hardware brings an element of fun to otherwise dreary everyday tasks."

That hardware looks set to boom, as voice control seeps into many other categories, rendering existing products obsolete, and shortening the replacement cycle. "It is likely we will see the capabilities of voice control transferred to devices and objects that we don't currently associate with the technology through the inclusion of built-in microphones," says Universal Electronics' Mr Jonkman. "The possibilities are boundless." **ert**

Make sure they're talking about you

Do you have a voice strategy? So far, voice assistants have been a way to sell smart speakers and other appliances, but some think that retailers need to understand how their customers are interacting verbally with the likes of Alexa, Google Assistant and Siri

"Intelligent assistants and voice search are disrupting brand discoverability as we know it," says Jon Buss, managing director for the UK and Northern Europe at Xext, which coordinates up-to-date business listing information across the likes of Google, Facebook, Bing and Yelp. Largely because voice search is more natural than typing, consumers are asking voice assistants different questions.

"It's easier to ask for something verbally than it is to type the same thing, and voice searches often contain more long-tail keywords than your average typed search," says Mr Buss, who thinks that this presents a new opportunity for brands to match products and services to specific consumer demands.

Long-tail keywords are three- and four-keyword phrases very specific to whatever you are selling, and what a consumer wants to buy. "If someone asks Siri where they can buy Bose headphones and what is the current retail price, how does Bose, or any retailer selling Bose products, have any confidence that Siri will provide the right answer at that moment of high intent?" says Mr Buss. "Or that the consumer will even receive an answer of any type? And how does a brand take control of this experience to drive the best possible revenue or experiential outcome?"

One way, he suggests, is for retailers to control and structure all publicly available information about their business and the products and services offered. That way, voice assistants will be better placed to give high-intent consumers correct answers. "If intelligent agents don't have the correct answers to consumer queries, these are wasted opportunities for brands to drive sales or footfall, and can ruin a brand experience," concludes Mr Buss.

