

Newsletter

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KIET
GROUP OF INSTITUTIONS

"DON'T BE AFRAID TO GIVE UP THE
GOOD TO GO FOR THE GREAT."

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Department of Computer Applications TECHNICAL NEWS

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Alexa, delete everything I said today: Amazon adds new privacy feature

It was reported last month that some Amazon employees listen to users' voice recordings as part of an effort to improve the software.

Amazon.com Inc. is updating its Alexa voice software to let users delete recordings of their voice using a spoken command, a move that follows criticism of the company's privacy practices related to its digital assistant. A coming set

of updates will offer users who have opted in online the ability to say “Alexa, delete everything I said today,” or, similarly, delete their most recent utterance. Previously, the only way to remove recordings was a tool on the Alexa privacy website.

“It's a good step in the right direction,” said Florian Schaub, a professor at the University of Michigan who has researched privacy issues related to smart speakers. Recent reporting and research on Amazon's digital assistant, he said, likely “helped inform these decisions” by the company.

Bloomberg reported last month that some '[Amazon employees listen to users voice recordings](#)' as part of an effort to improve the software. In some cases, those workers can access the location of the person whose voice they are transcribing. Amazon's privacy and user policies didn't explicitly disclose either practice.

Meanwhile, a coalition of children's and privacy groups asked the Federal Trade Commission to investigate whether Amazon had violated children's privacy laws by giving parents insufficient control of their kids' data. And CNET reported that even after users delete Alexa voice recordings, a text record of that information lingers on Amazon's servers. (Amazon said it was working on an update that would remove those text records from all of its systems after a user tries to delete them.)

Amazon's move also comes as other technology giants make a point of touting their own efforts to safeguard user data. Facebook Inc., under fire after a string of privacy scandals, has started emphasizing privacy features. Alphabet Inc.'s Google highlighted its own work on the topic at its developer conference earlier this month, and Apple Inc. has made privacy a cornerstone of recent marketing campaigns.



Google Search to rank sites on basis of 'mobile-first

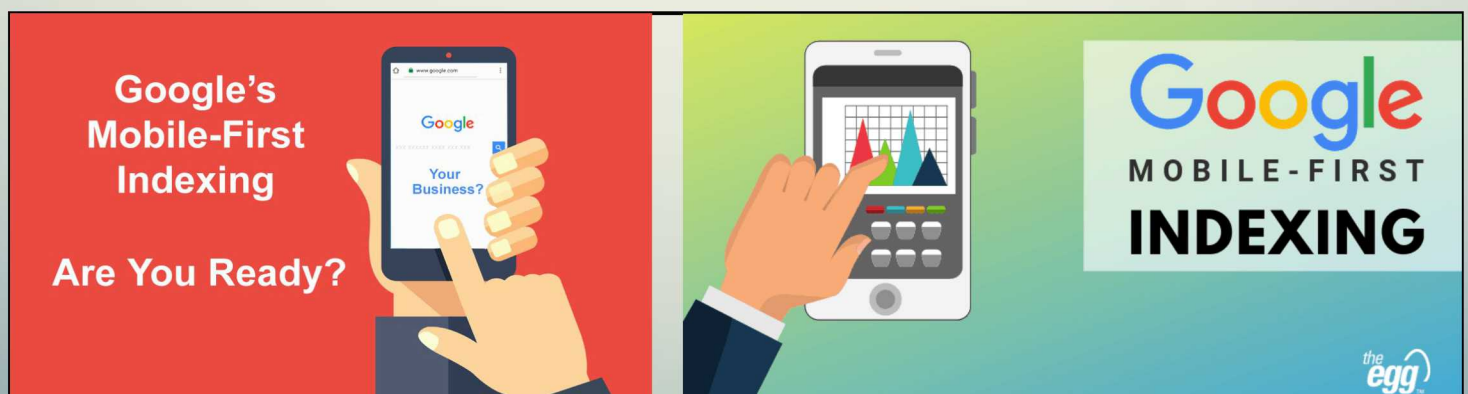
Mobile-first indexing” means Google would consider the mobile version of any new website for evaluating, indexing and ranking the site, instead of the desktop version which was used primarily.

Google has announced that starting July 1, all new websites would be analysed and ranked on Search on the basis of “mobile-first indexing”. “Mobile-first indexing” means Google would consider the mobile version of any new website for evaluating, indexing and ranking the site, instead of the desktop version which was used primarily.

“We're happy to announce that 'mobile-first indexing' will be enabled by default for all new, previously unknown to Google Search websites, starting July 1, 2019,” John Mueller, Developer Advocate, Google, wrote in a blog-post on Tuesday.

For older and existing websites, Google would determine their readiness for “mobile-first indexing” based on the parity of content including text, images, videos, links and structured data as well as other meta-data-like titles and descriptions. “We will notify them through Search Console once they're seen as being ready. Since the default state for new websites will be 'mobile-first indexing', there's no need to send a notification,” Mueller said.

Google said it is pleased to see that “mobile-first indexing” has come a long way. “We're happy to see how the web has evolved from being focused on desktop to becoming mobile-friendly, and now to being mostly crawlable and indexable with mobile user-agents,” Muller said.



10th Gen Intel Core processors unveiled at Computex 2019

10th Gen Intel Core processors are built on the company's 10nm process technology, new “Sunny Cove” core architecture and new Gen graphics engine.

Intel on Tuesday unveiled its 10th Gen Intel Core processors at the Computex 2019 trade show and also revealed new details about its innovation programme -- “[Project Athena](#)” -- that will level up mobile computing.

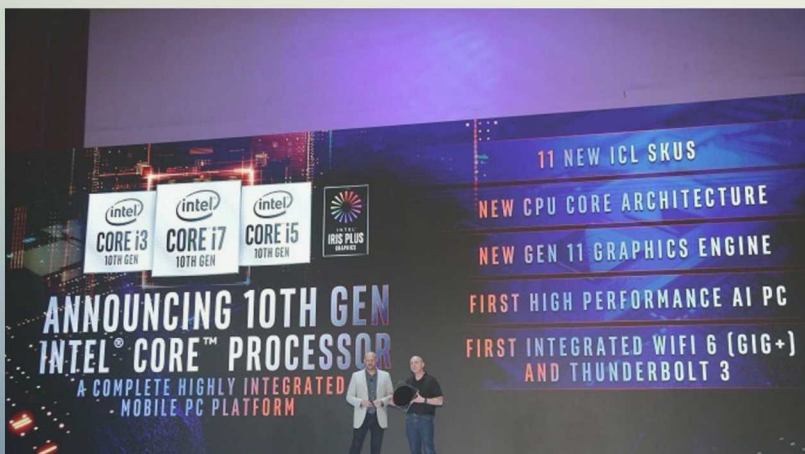
The new 10th Gen Intel Core processors are now shipping, with original equipment manufacturers (OEM) systems expected to be available by end 2019.

“10th Gen Intel Core processors -- our most integrated CPU -- and 'Project Athena' are great examples of how our deep investments at a platform level will help fuel innovation across the industry,” Gregory Bryant, Senior Vice President and General Manager of the Client Computing Group, said in a statement. The company's first 10th Gen Intel Core processors bring high performance AI to the PC at scale with its Deep Learning Boost (Intel DL Boost).

The processors are built on the company's 10nm process technology, new “Sunny Cove” core architecture and new Gen graphics engine. The 10th Gen Intel Core processors will range from Intel Core i3 to Intel Core i7, with up to four cores and eight threads, up to 4.1 max turbo frequency, and up to 1.1 GHz graphics frequency.

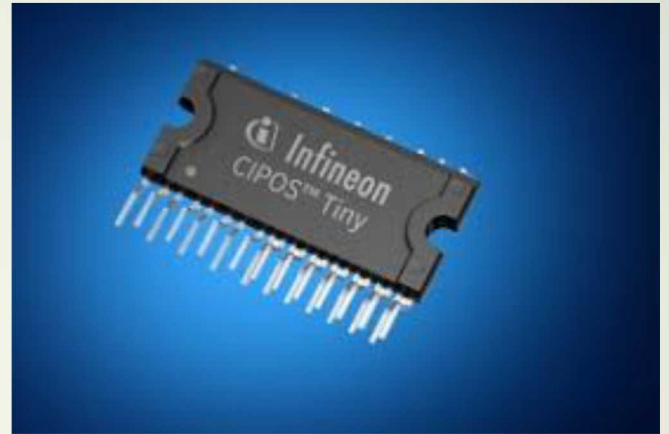
The highly-integrated 10th Gen Intel Core processors give (OEM) partners the freedom to innovate on design

and aesthetics by reducing the silicon footprint while still delivering the latest and greatest standards and world-class performance.



RS Components offers Renesas' power modules for servers

Encapsulated power modules from Renesas Electronics are now available from distributor, [RS Components](#). The [ISL8210M](#), [ISL8212M](#), [ISL82180M](#) and [ISL8282M](#) power modules are single-channel, synchronous step-down power modules that provide PoL conversion for fpgas, dsps, asics and memory in servers, storage, optical networking, telecoms and industrial applications.



The modules deliver 10A or 15A continuous current at PoL and combine a pwm controller, inductor and mosfets to deliver what is claimed to be the highest power density of an encapsulated module in their class in these space-sensitive applications.

All modules in the family are pin-to-pin compatible for the appropriate current rating and the level of PMBus capability to be used without requiring PCB layout modifications.

Two, the ISL8280M and ISL8282M have an additional digital PMBus v1.3 interface, in addition to the analogue interface. The ISL8210M and ISL8212M analogue-loop modules offer a higher power density, expanded feature set via pin-strappable settings, and lower cost when compared to previous power modules from Renesas, adds the distributor.

In addition to operation from a single 4.5 to 16.5V wide-input power rail, the modules offer selectable light-load mode (PFM), efficiency up to a peak of 95% and low thermal resistance; for the majority of applications, a heatsink is not required for full power operation, says the company.

All modules in the family use the proprietary R4 high-speed control loop technology to eliminate compensation components via a stable control loop. They are also claimed to deliver best-in-class fast transient response across the load and input voltage. The digital PMBus interface modules can optimise the control loop to override pin-strap settings, and provide what the company describes as “extensive telemetry”.

The modules are shipping now in compact and thermally enhanced 12mm x 11mm x 5.3mm Grid HDA (high density array) packages.

There are four development boards to support evaluation of each of the devices.

Google and Apple criticise GCHQ eavesdropping idea

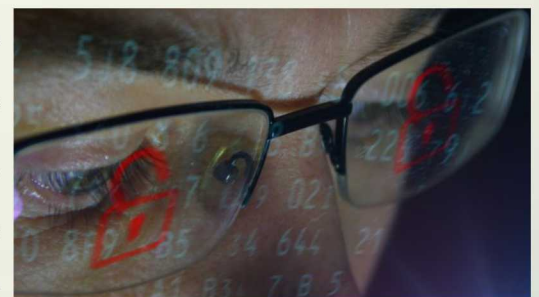
A proposal by the UK security agency GCHQ to eavesdrop on encrypted messages has been strongly criticised by big tech firms and rights groups.

[Google and Apple were among 47 firms to sign an open letter, saying it](#) was a "serious threat" to trust and security. The GCHQ plan would effectively mean that a copy of every encrypted message would be sent to the security services. The technique resembled the way that GCHQ currently used wiretaps to listen to unencrypted chat, said the agency.

The [plan for a so-called "ghost protocol" was first floated](#) by the UK National Cyber Security Centre's technical director Ian Levy and GCHQ's chief codebreaker Crispin Robinson in November 2018.

The proposal was intended to add to the debate about strongly encrypted messaging systems that security services have struggled to break. Instead of asking for encryption systems to be weakened so they can be cracked, the plan would instead copy messages and send the duplicate on to a third recipient. That other recipient would be able to read the message because they possessed a key corresponding to the one with which it was encrypted.

In their letter, rights groups, industry bodies and tech firms said the idea would "violate" important human rights principles. Signatories include Google, Apple, WhatsApp and Microsoft as well as Big Brother Watch, Privacy International and the Center for Democracy and Technology. The letter said that implementing GCHQ's idea would require changes that

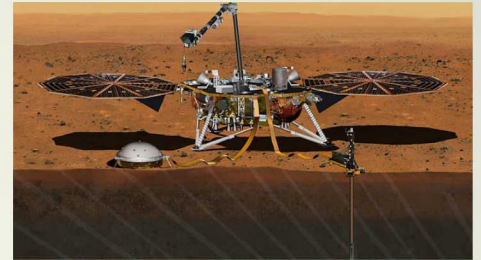


"undermine user security and trust" and potentially introduce vulnerabilities into messaging systems. "The overwhelming majority of users rely on their confidence in reputable providers to perform authentication functions and verify that the participants in a conversation are the people they think they are, and only those people," said the letter. "GCHQ's ghost proposal completely undermines this trust relationship and the authentication process," it added. It would also threaten privacy and free speech, wrote the signatories. In response, Mr Levy said its idea was "hypothetical" and intended as a "starting point for discussion".

He added: "We will continue to engage with interested parties and look forward to having an open discussion to reach the best solutions possible."

Nasa's latest Mars craft nears landing for unprecedented seismic mission

After sailing 548 million km on a six-month voyage through deep space, the robotic lander InSight was due to touch down on Mars at about 1:30 am IST.



Nasa's first spacecraft built to explore the deep interior of another world streaked toward a landing scheduled for Monday on a vast, barren plain on Mars, carrying instruments to detect planetary heat and seismic rumblings never measured anywhere but Earth. After sailing 301 million miles (548 million km) on a six-month voyage through deep space, the robotic lander InSight was due to touch down on the dusty, rock-strewn surface of the Red Planet at about 8 pm GMT.

If all goes according to plan, InSight will hurtle through the top of the thin Martian atmosphere at 12,000 miles per hour (19,310 kilometers per hour). Slowed by friction, deployment of a giant parachute and retro rockets, InSight will descend 77 miles through pink Martian skies to the surface in 6 1/2 minutes, traveling a mere 5 mph (8 kph) by the time it lands.

The stationary probe, launched in May from California, will then pause for 16 minutes for the dust to settle, literally, around its landing site, before disc-shaped solar panels are unfurled like wings to provide power to the spacecraft.

The mission control team at Nasa's Jet Propulsion Laboratory (JPL) near Los Angeles hopes to receive real-time confirmation of the craft's arrival from data relayed by a pair of miniature satellites that were launched along with InSight and will be flying past Mars. The JPL controllers also expect to receive a photograph of the probe's new surroundings on the flat, smooth Martian plain close to the planet's equator called the Elysium Planitia.

The site is roughly 373 miles (600 km) from the 2012 landing spot of the car-sized Mars rover Curiosity, the last spacecraft sent to the Red Planet by Nasa. The smaller, 880-pound (360 kg) InSight - its name is short for Interior Exploration Using Seismic Investigations, Geodesy and Heat Transport - marks the 21st US-launched Mars missions, dating back to the Mariner fly-bys of the 1960s. Nearly two dozen other Mars missions have been sent from other nations.

Google invests \$670 million to expand its data centre in Finland

Tech companies are racing to build more such facilities as businesses and individuals increasingly store more data online on so-called cloud platforms.

Google will pay about 600 million euros (\$670 million) to build a data centre in Finland amid a push by its parent Alphabet

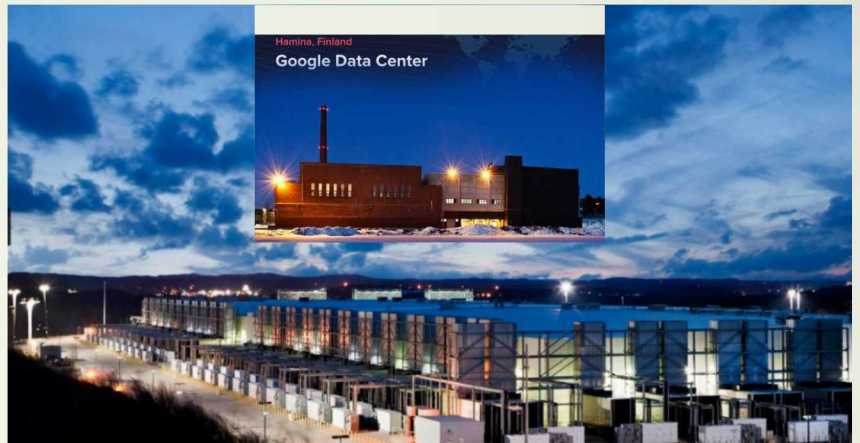
Inc. to invest heavily in servers and feed demand for faster access to files and media. The new construction will add to [Google's](#) existing data-centre complex in Hamina on the south coast of Finland, taking the company's total investment there to 1.4 billion euros, it said in an emailed statement on Monday.

Tech companies are racing to build more such facilities as businesses and individuals increasingly store more data online on so-called cloud platforms. Google offers consumers services including email, maps, search and photos, as well as videos on its YouTube website.

The Mountain View, California-based company currently has 58 data centres around the world. In Europe, it has invested more than 4.3 billion euros in five such facilities since 2007 and its accrued capital expenditures for the first quarter came to \$4.5 billion, comprising spending on data centres, servers and office facilities.

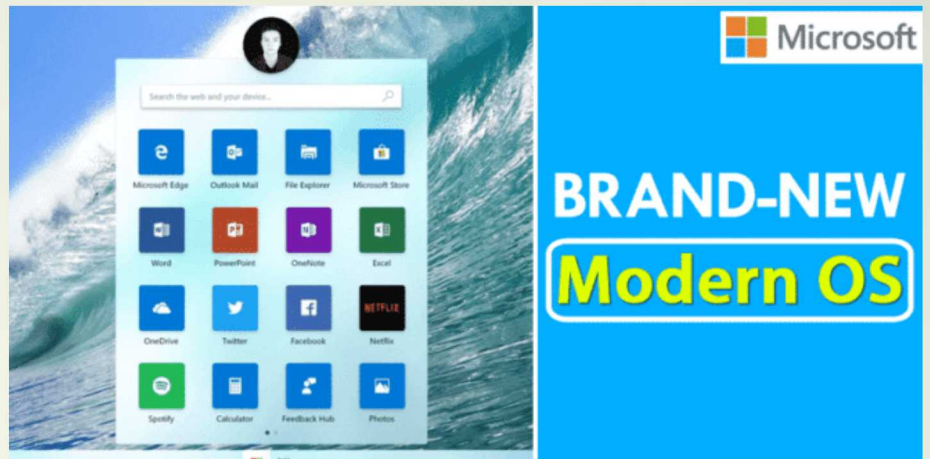
The expansion in Finland comes as Google is pushing into video gaming with its [new streaming service Stadia](#), which will allow players to access the action through the web without expensive consoles or personal computers. Stadia runs through the company's YouTube video-streaming platform and requires the data-centre network to function.

Google's Hamina complex will be powered by renewable energy acquired from three new wind farms in the Nordic nation, it said last year.



Microsoft hints towards a new 'modern OS' with seamless updates

Microsoft's VP of Consumer and Device Sales, Nick Parker, hinted yesterday towards a new 'modern OS' with seamless updates at the Computex trade show in Taiwan. According to Parker, the OS will have “enablers” and “delighters” like seamless updates, and sustained performance.



The company mentioned a few other features that will define the operating system: separating application, compute, and, core OS to make it secure, constant connectivity, and AI-powered applications. In [a blog post](#), Microsoft said that the said OS will have “form factor agility” – meaning it would work on different kind of devices.

A modern OS is also multi-sense. People can use pen, voice, touch, even gaze – what ever input method a user wants to use works just as well as the keyboard and mouse. □ Finally, a modern OS provides the ultimate in form factor agility. A modern OS has the right sensor support and posture awareness to enable the breadth of innovative form factors and applications that our partner ecosystem will deliver.

This indicates that the operating system might work on laptops, tablets, and phones too (Surface phone incoming?). Interestingly, there was no mention of “Windows” from the company, and it's possible that it might start afresh with new branding for a cross-platform operating system.

In March, a report from [The Verge](#) suggested that Microsoft is working on ChromeOS-like operating system named Windows Lite. However, it's hard to know at this stage if this 'modern OS' is indeed the rumored Windows Lite. There's no official word on what shape this OS would take, so we can't expect it to be released in the immediate future. But, it would be refreshing to see an operating system that would take on the duopoly of Apple and Google.

“Nanoemulsion” gels offer new way to deliver drugs through the skin

Novel materials made with FDA-approved components could deliver large payloads of active ingredients.

MIT chemical engineers have devised a new way to create very tiny droplets of one liquid suspended within another liquid, known as nanoemulsions. Such emulsions are similar to the mixture that forms when you shake an oil-and-vinegar salad dressing, but with much smaller droplets. Their tiny size allows them to remain stable for relatively long periods of time.

The researchers also found a way to easily convert the liquid nanoemulsions to a gel when they reach body temperature (37 degrees Celsius), which could be useful for developing materials that can deliver medication when rubbed on the skin or injected into the body.

“The pharmaceutical industry is hugely interested in nanoemulsions as a way of delivering small molecule therapeutics. That could be topically, through ingestion, or by spraying into the nose, because once you start getting into the size range of hundreds of nanometers you can permeate much more effectively into the skin,” says Patrick Doyle, the Robert T. Haslam Professor of Chemical Engineering and the senior author of the study.

In their new study, which appears in the June 21 issue of *Nature Communications*, the researchers created nanoemulsions that were stable for more than a year. To demonstrate the emulsions' potential usefulness for delivering drugs, the researchers showed that they could incorporate ibuprofen into the droplets.

Energy reduction

One of the easiest ways to create an emulsion is to add energy — by shaking your salad dressing, for example, or using a homogenizer to break down fat globules in milk. The more energy that goes in, the smaller the droplets, and the more stable they are.

Nanoemulsions, which contain droplets with a diameter 200 nanometers or smaller, are desirable not only because they are more stable, but they also have a higher ratio of surface area to volume, which allows them to carry larger payloads of active ingredients such as drugs or sunscreens.

