

FutureHorizons



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First Haptic Smartphone Display Offers Texture Sensations

Bringing textures to life by changing the sensation of a surface as your finger slides over plastics, wood, and glass is the ambition of Hap2U, a France-based haptic technology startup.

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Teraki Takes 'Quantum' Leap on Big Data

Big data is an essential element in connected devices. Nevertheless, most vendors are struggling to deal with the exponential growth in data volume, specifically in paying for a CPU inside a system powerful enough to process data, and to send big data to the cloud for AI training.

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"Smart Washlet" Provides Total Comfort and Efficiency

LAS VEGAS — If you don't think there's serious science in the development of the total toilet, you haven't talked to Bill Strang, president of operations and e-commerce at Toto USA.

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TALK TO US



Battery-Powered IoT Products Get Extended Life from SoC

The new SoC supports the new Bluetooth 5.2 standard, Bluetooth mesh, and direction finding with sub-meter accuracy. IoT is a reality present and used in the "consumer" world, with the adoption by consumers of many products/services already widespread from wearable items to "smart" appliances and upcoming transports, connected vehicles, and autonomous/assisted driving.

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EVENTS

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Multi-Finger Authentication for Smartphones

Fingerprint biometrics have become a standard security feature on smartphones, but consumers demand more from technology to securely make online shopping, banking transactions, and bill payments. For France-based Isorg SA, multi-finger authentication is the next phase in smartphone identity recognition.

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First Haptic Smartphone Display Offers Texture Sensations

Bringing textures to life by changing the sensation of a surface as your finger slides over plastics, wood, and glass is the ambition of Hap2U, a France-based haptic technology startup.

At this year's Consumer Electronics Show (CES), Hap2U is demonstrating what it claims is the world's first haptic smartphone display, which allows users to feel and sense objects on touchscreens. Its Hap2phone technology was named Honoree of the 2020 CES Innovation Award.

Interactive and tangible With the Hap2phone, Hap2U is targeting a global haptic component market that will be worth \$4.8 billion by 2030, according to a recent report by IDTechEx. Haptic technologies have been used in products such as game console controllers for more than 30 years and can be found in the vast majority of smartphones, smartwatches, and electronic devices. Over the past five years, however, the research firm said it has observed a shift in the core haptic technology and "an even more significant shift in the direction of innovation efforts to develop the haptic technologies of the future."

Teraki Takes 'Quantum' Leap on Big Data

Teraki has developed software technology that can resize and filter data, for more accurate object detection and machine learning.

LAS VEGAS – Big data is an essential element in connected devices. Nevertheless, most vendors are struggling to deal with the exponential growth in data volume, specifically in paying for a CPU inside a system powerful enough to process data, and to send big data to the cloud for AI training.

One answer comes from Teraki, a Berlin, Germany-based startup. Its mission in life is to tackle challenges in edge data processing. Teraki applies signal processing to enable embedded systems that can leverage incoming data more efficiently — by minimizing latency and maximizing algorithm accuracy.

"Smart Washlet" Provides Total Comfort And Efficiency

Toto USA's president of operations and e-commerce summed up the company's development of a toilet that goes way beyond "minimal" as the result of a "scientific approach for cleaning yourself efficiently, for a more comfortable and delightful experience" in the bathroom.

LAS VEGAS — If you don't think there's serious science in the development of the total toilet, you haven't talked to Bill Strang, president of operations and e-commerce at Toto USA. Toto's newest superjohn, the Neorest NX1 dual-flush "smart washlet" partakes of hydrophilic science, lubricity studies, and tribology to counteract the modern porcelain indoor flush toilet's worst enemy — hydraulic adhesion.

In sum, a lot of thought has gone into Toto's latest pride and joy, partly because — as Strang notes with a knowing smile — the Japanese, some of whom started Toto, are "fanatical" about bathroom hygiene.

Battery-Powered IoT Products Get Extended Life from SoC

The new SoC supports the new Bluetooth 5.2 standard, Bluetooth mesh, and direction finding with sub-meter accuracy.

Silicon Labs presented at CES a new system-on-chip (SoC) EFR32BG22 (BG22) that offers hardware and software stack combinations to meet market demand for battery-powered high-volume IoT products.

IoT is a reality present and used in the "consumer" world, with the adoption by consumers of many products/services already widespread from wearable items to "smart" appliances and upcoming transports, connected vehicles, and autonomous/assisted driving.

The advent of the IoT is steering the future of electronics toward a world where physical objects will all be connected and wireless communication will offer higher levels of freedom and flexibility. There is a growing demand for ultra-low-power wireless connectivity from consumers seeking to extend their wireless experience to compact electronic devices with small batteries.

Multi-Finger Authentication for Smartphones

Fingerprint biometrics have become a standard security feature on smartphones, but consumers demand more from technology to securely make online shopping, banking transactions, and bill payments. For France-based Isorg SA, multi-finger authentication is the next phase in smartphone identity recognition.

At this year's Consumer Electronics Show, Isorg is demonstrating a full-screen fingerprint-on-display sensor module for multi-finger smartphone authentication. It supports up to four fingers simultaneously touching a smartphone display.