

Look Inside.™

Our Digital World at the Intel Future Showcase

The Intel Future Showcase takes a look inside our digital world. A technology journey from the cutting-edge creations we're seeing today to the products of tomorrow, all the way through to technologies and concepts you may enjoy in the more distant future.

Personalized technology today – and moving forward – is about providing people with experiences they are guaranteed to want and love. The boundaries between technology and people are blurring. Personalization used to mean choosing wallpaper for your desktop computer, a ringtone on your mobile phone or a laptop in red instead of gray. The best technologies now will be aware of the full context of our respective preferences and provide us with experiences tailored to what we want while we work, rest and play.

Intel is working with the technology industry to accelerate and deliver a smart, seamlessly connected and integrated digital world. Because Moore's Law enables us to continuously shrink devices, technology is beginning to disappear into the objects and spaces that we interact with on a second-nature basis – even the fabric of our clothes. One day the need to remember to “bring your device” may seem quaint because intelligent objects will encompass you to suit whatever you need in the moment.

TODAY

Chat Funner

Today's showcase is the launch venue for a new 3-D mobile messaging app, Pocket Avatars. Using the standard camera on an Android* or iOS* phone or tablet, Pocket Avatars captures your facial expressions, head movements and voice, and then maps this data onto a 3-D character chosen from a library. The app is available now for download from the Apple App Store* and Google Play*.

Versatile Devices

Intel processors are at the heart of versatile devices that work the way you want to work. From 2 in 1s to tablets and smartphones, today there is a device that suits all your ways of working.

- Screens that can be detached from the keyboard to become a lightweight tablet
- Screens that can be flipped around, switching effortlessly from a traditional notebook into a tablet
- Stand-alone tablets that come in a range of sizes, including compact 7-inch and 8-inch devices that can be tucked in a handbag and those offering a dual-boot option with both Windows* 8.1 and Android

Intel processors also power mobile phones, including tablet-sized devices running Android. With cellular capability offering up to 32 hours of talk time, these devices also are ultra slim and offer a powerful, full HD display.

Intel is at the heart of Chromebooks* too. Chromebooks are low-cost devices that run Google* Chrome OS and connect via the cloud to your Google services.



However you prefer to work, whether it's sitting down with a fully featured laptop or a Chromebook, on the go with a Windows or Android tablet, or with an Android-powered smartphone, there is an Intel-powered device available today to work for and with you.

McAfee on Mobile

Taking security seriously also means protecting Android-based mobile devices from malware – which is a very real threat to the Android OS. The most recent McAfee Mobile Security Report found that Android malware almost tripled from 2012 to 2013.

As part of Intel's initiative to make security an integrated part of the consumer experience, a full-featured McAfee solution is free for all Intel-based mobile devices. McAfee's mobile security suite takes a number of steps to protect your Intel-powered device, including alerts regarding risky Wi-Fi networks you are trying to connect to and the CaptureCam feature that snaps a picture of someone who has made multiple unsuccessful attempts to unlock the device.

The suite is integrated with Intel® Device Protection Technology to provide atom-level security extensions. It is high-tech peace of mind designed to protect your phone from today's threats.

From Today into Tomorrow: Make it Wearable and the Maker Movement

Intel is committed to lowering the barriers to entry for all innovators – whether it's a child, the hobbyist or a professional designer – who have great ideas but not deep experience with technology. Both Intel® Galileo and Intel® Edison are designed for tinkerers and makers, taking personalization to the next level by designing creations from their own imaginations. CEO Brian Krzanich first unveiled Intel Galileo at the Maker Faire Rome in October 2013. Intel Galileo is our family of Arduino-compatible development boards featuring Intel architecture and designed for the maker and education communities. The Intel showcase includes a light installation that is controlled through Intel Galileo.

One technology that straddles today and tomorrow is wearables, devices that make technology truly personal. Devices can now measure running speed, heartbeat, steps, blood pressure and even gauge the quality of your sleep via wristwatches that act as a companion to – or even replace – your smartphone. Intel's strategy is to imagine and create reference design devices and platforms ready to be used by customers in the development of wearable products. At the showcase, you will be able to see one example of Intel's commitment to wearable devices in the form of the Basis Health Tracker, in addition to browsing some of the top entries to the Intel Make It Wearable Challenge. The Challenge celebrates creativity by inviting individuals, teams and organizations to develop ideas for wearable products.

TOMORROW

Llama Mountain

An Intel concept design fresh from its debut at Computex, Llama Mountain captures the future of 2 in 1 devices while remaining feather light, super sleek and staying cool without a fan. The concept 2 in 1 detaches from its keyboard to function like a tablet, features a 12.5-inch screen and measures just 7.2mm thick. The Intel® Core™ M processor makes the sleek design possible with 14-nanometer



transistors, which are smaller than today's 22-nanometer transistors of 4th generation Intel Core processors.

Wireless Charging

How many times have you had to hunt around for a charger and cable for your device? Families can often find that every plug in the house seems to have sprouted a charger with a mobile or tablet umbilical cord connected to the wall.

And what if you have a device that doesn't use a standard charger? If you're running out of juice at someone else's home or office and they don't have the right connector for you to borrow, you're in trouble.

Intel's wireless charging bowl is meant to put an end to the "spaghetti junction" of wires and endless hunt for a charging station. It's a smart and smart-looking bowl that can charge a number of devices at the same time.

Using smart charging coil technology, the wireless bowl is a consumer-friendly product that shows how powering up several different devices can be a no-brainer – even ones that use different connectors. And, as the icing on the cake, the bowl will look equally appealing in a chic corporate environment or in a home.

Intel® RealSense™ Technology

Last year Intel made a foray into perceptual computing, which promises to bid farewell to the old way of interacting with technology: farewell to the mouse and hello to gesture-controlled devices.

Since then, the technology has matured by getting smaller and neater. Intel RealSense frees you from clipping a chunky camera onto your monitor. The camera has been made smaller and moved into all-in-one systems and the lids of laptops.

At the heart of the system is an integrated 3-D camera and 2-D camera model, which means devices can "see" depth in the same way as humans.

As well as being able to control devices with gestures, Intel RealSense will be able to create 3-D objects on the computer that the user will be able to mold using natural gestures, and ultimately share those objects with others and print them out using 3-D printers.

This will bring a whole new level of realism and interactivity to work and play: from gaming to calling grandma, from videoconferencing to designing product. Without the added distraction of bulky 3-D glasses, RealSense is the most natural way to interact with technology – and with distant people.

Intel Edison

Honey, I shrunk the computer! Just when you thought they couldn't get any smaller, Intel introduced Intel Edison a system-on-a-chip that isn't much bigger than a stamp. The Intel Edison development board is a product-ready, wirelessly enabled general purpose compute environment. It is designed for inventors, entrepreneurs, consumer product designers and industrial IOT solutions providers that create wearable or small form factor devices to be sold through commercial channels to consumers. Intel Edison is slated for release in summer of this year.



THE FUTURE

Make Your Own Robot

Meet Jimmy the Robot. Jimmy, who was shown off at the Maker Faire in New York at the end of last year, was created by Intel Futurist Brian David Johnson to demonstrate how anyone will be able to use open-source files to create their own robot and print it out on a 3-D printer.

Jimmy himself will soon be available for you to download and print for an affordable price, thanks to Johnson's sharing of the "Jimmy template" with 10 teams at various universities. Once you've printed out and assembled Jimmy, the idea is that you'll be able to program him and install apps to add to his capabilities in the same, simple way we now install apps on mobile devices.

Jimmy is a glimpse of a future when we will all be able to create and print our own robots – and their possibilities are endless. It's up to you to come up with innovative applications for Jimmy; the only limit is your imagination.

Future In-Car Experience

While there's a lot of talk about self-driving cars, Intel's vision of cars includes one where you're still in control of the vehicle – although the car will be an intelligent device. You'll be able to talk to your car and tell it where to go by talking to it – and the car will detect if you've got the kids on board and will automatically fire up their favorite movie to entertain them during the journey.

Smart Solar Controller

Solar power is already ubiquitous, but Intel has envisioned a 500cm solar panel that uses the variable DC current output directly rather than converting the sun's energy into AC. The aim is to use this device in developing world locations where there is no existing electricity to charge devices, such as the Intel® Classmate PC made for children.

Embedded Security for the Internet of Things

One of the hot trends getting a lot of attention right now is the "Internet of Things," where connected devices reach out to the cloud, sharing analytics and insights (e.g. data of local sensors such as temperature sensors) to add to and inform their functionality.

Anything from cars to wearable devices and home appliances may be connected, but we have now given hackers a brand new, vulnerable entry point. Intel's latest security research aims to identify these ports and ensure devices remain as safe as possible from cyber threats.

At the Intel Future Showcase, a demonstration in the automotive space highlights how modern vehicles are now computerized. Many deeply embedded computers are responsible for monitoring and control of vehicle systems, such as telematics, infotainment, connectivity and advanced driver assistance systems. While such features enhance usability and convenience, they also widen the threat landscape significantly, increasing the potential for malicious activity.



In the demonstration, there is a lightweight, trusted execution scheme optimized for the vehicle, which will demonstrate how malicious software manipulation can be successfully intercepted and mitigated.

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¹McAfee Mobile Security Report: <http://www.mcafee.com/us/resources/reports/rp-mobile-security-consumer-trends.pdf>

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