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Backgrounder

A New Feel for Technology: Touch Enhances Our Computing Experiences

SANTA CLARA, Calif., Oct. 22, 2012 – Over the last half-century, technology has redefined the world we live in. Yet, the way we interact with our computers, physically and emotionally, has been somewhat limited – until now. People will now enjoy a full computing experience at the tips of their fingers.

Anticipate how much touch will begin to open up our world of computing to a broader range of uses with over 40 touch-enabled Ultrabook™ devices worldwide, inspired by Intel, coming to stores by the end of 2012.

A Change You Can Perceive: Wave Goodbye to the Technology of the Past

The keyboard and mouse have provided highly functional ways to engage with what's on our screen – and will continue to do so. Touch offers another spontaneous and meaningful way to enjoy our electronic lives.

The introduction of touch to computing is just the beginning of an emerging computing model called “perceptual computing,” or the ability to provide human senses to the computer to enable it to naturally perceive the user's intentions.

Intel continues to lead the computing industry in creating more natural, human modes of computing. The increasing computing power of the PC ‘brains,’ or Intel processor, will help enable this capability.

Relying on modelling of numerous complex factors – from human perception to neuro-physiological processing – perceptual computing will include using our voice, as well as our hands, to manage our devices. Other capabilities like facial recognition, cameras and sensors will also help users' control the screen in a more interactive, personalized fashion. In the future, we will quite literally be able to wave goodbye to the technology of the past.

The People Speak: Give Me Touch

Intel's PC Client Solutions Division¹ conducted research and found that the ability to touch a screen as a way to navigate through content makes people feel more empowered and in control. Some of the caution, even fear, associated with using technology was removed, according to this research.

A generation of users who did not grow up using technology now find it more intuitive, and those too young to fully understand the complexity of computing are suddenly engaged with limitless opportunities to learn and be entertained.

Intel researchers also found new patterns of interaction emerged with touch-enabled clamshell devices (an electronics device where two or more sections fold via a hinge) that provide many different choices and varieties of ways to interact with the devices.

¹ Research conducted by Intel PC Client Solutions Division in USA, China, Italy and Brazil. The testing observed and tracked 81 individuals while using a touch clamshell device. Over 4,000 interactions during a number of scenarios were logged throughout the research.

Some have wondered if users of touch-enabled PCs could suffer from a phenomenon coined ‘Gorilla Arm,’ which implies that an arm that is held up unsupported will suffer from fatigue, resulting in an unpleasant experience.

Intel research found instead that many users would adopt a relaxed body position with arms resting on the side of the device, allowing a two-handed engagement with the screen. This provided variety to the repetition of mouse and keyboard use that is commonly associated with repetitive strain injuries.

Such was the fluent nature of these interactions that the research team couldn’t even determine whether users were left or right handed – it all seemed so natural! One respondent went so far as to describe it as “a better ergonomic landscape,” such was the sense of freedom the touch-screen delivered.

A Human Association with Touch

People of all ages can associate physical and mental benefits with the ability to touch and be touched². According to Intel research, when given a clamshell device with touch, people reported having a better emotional connection to their device.

The word touch expresses affection or tenderness and means different things to different people. Touch is a gateway to our engagement with other people and the things around us. For some it’s a physical connection to express affection or tenderness. From birth, our understanding of the world is defined by touch – children try to comprehend their environment by reaching out and grabbing it. Babies, when too young to fully manipulate objects with their hands, put them in their mouths where touch receptors are at the highest density.

Looking across the world there are different rules of etiquette when it comes to physical contact. Cheek kissing, for example, is a gesture that’s entirely natural and relaxed in some cultures, yet a point of awkwardness or confusion in others.

A handshake might instead be the first choice to welcome someone – yet it’s still a touch-based interaction we use to show our interest in another person.

About Intel

Intel (NASDAQ: INTC) is a world leader in computing innovation. The company designs and builds the essential technologies that serve as the foundation for the world’s computing devices. Additional information about Intel is available at newsroom.intel.com and blogs.intel.com.

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For additional information on related topics please see:

“Do People Want Touch on Laptop Screens?” Intel Free Press, 03/22/12

<http://freepress.intel.com/community/news/blog/2012/03/22/do-people-want-touch-on-laptop-screens>

Wroblewski, L “Re-imagining Apps for Ultrabook™ (Part 1): Touch Interfaces”, Intel Software Network, 08/09/12

<http://software.intel.com/en-us/blogs/2012/08/09/re-imagining-apps-for-ultrabook-part-1-touch-interfaces/>

Baxter-Reynolds, M. “The Human Touch: Building Ultrabook™ Applications in a Post-PC Age”, Intel Software Network, 05/04/12 - <http://software.intel.com/en-us/articles/the-human-touch-building-ultrabook-applications-in-a-post-pc-age/>

² <http://www.livestrong.com/article/186495-importance-of-human-touch/>