



Intel Researchers Explain Why People Will Want Ultrabooks

What's an ultrabook?

It's a question a lot of Americans will be asking this week as Intel kicks off a big-budget marketing campaign for these portable computing devices that aim to be especially fast, sleek, power-efficient and data-secure. Intel and Taiwanese PC maker Asus are scheduled to hold a New York press conference Tuesday to discuss the ultrabook concept and show some ultrabooks that will soon be available in the U.S.

Popularizing a new device genre in a gadget market already clogged with dozens of smartphones and tablets will be tricky even for a behemoth like Intel. To give ultrabooks traction, Intel will be marshaling its brand, industry connections — and lots of research. The company says the ultrabook idea stemmed from some of the most comprehensive consumer research it has ever conducted. That fact gives Intel confidence people will adopt the devices even though similar launches — remember smartbooks? — fizzled. Intel has even predicted that 40% of consumer laptop purchases could be shifted to Ultrabooks by the end of 2012. (Some analysts have said a 10-20% share is more likely.)

If ultrabooks fail, it won't be for lack of research. Intel has long studied what people want in future computer chips and computing devices. But in 2009 the company decided to take a different approach with a project focused on the idea of performance.

Intel was interested in the notion of performance because the term is commonly cited when people talk about why they bought a new computer or would want to buy a new computer. This time, however, Intel conducted “an emotional inquiry” using techniques from neuroscience, cognitive psychology and behavioral psychology, said David Ginsberg, Intel's Director of Insights and Market Research, in an interview. The goal was to find what people mean emotionally when they talk about computer or microprocessor performance.

After conducting consumer interviews around the world, it became clear that “performance” didn’t only mean speed, for example. Instead, people described good computing performance much like they would (a positive) experience of running a marathon: time flying, feeling in the zone, everything humming in harmony.

“People want technology to fade away into the background so they can focus on the task at hand,” said Ginsberg. “That still implies speed but it’s about how people experience speed.”

By 2010, the researchers felt ready to approach Intel’s engineers with their findings. “Usually, Intel starts product development with a technical idea...here we were starting from the user experience,” said Ginsberg. “It was a different way to start the conversation.”

Since Intel’s PC division was looking for ideas about next-generation laptops, the researchers distilled the study into four attributes they thought should be included in such a device:

- **Flow:** meaning an instant-on, always-connected device that loads applications quickly, facilitating rather than interrupting what users want to do;
- **Mobility without compromise:** making the device light and compact but also capable;
- **Design that reflects the user:** a device that is attractive since people view their gadgets as an expression and extension of themselves;
- **Security:** including services like antivirus, identity protection and anti-theft software to protect users’ data

Once the ultrabook parameters were set, Intel started recruiting its many PC manufacturer partners to support the project. Asus was the first to show a prototype, at the May Computex trade show in Taiwan. Acer, Lenovo and Toshiba have also announced ultrabooks. HP, Dell, LG and Samsung will reportedly follow with their own ultrabooks early next year.

Intel expects a lot more devices and variety in the near future. In August, it established a \$300 million “Ultrabook Fund” that will invest in companies making technologies that could be incorporated into ultrabooks. It’s one reason Ginsberg calls early ultrabooks, such as Asus’ UX21 — the device expected to be shown at Tuesday’s event — and Acer’s Aspire S3 — which will be available for North American customers this week — “phase one” ultrabooks. With their clamshell shapes, these gadgets resemble laptops, albeit thinner and lighter. Ginsberg says eventually ultrabooks will have touchscreens that will enable them to function as tablets or laptops, depending on user preference. Future ultrabooks will get a silicon upgrade, too. Current ultrabooks run on Intel’s “Sandy Bridge” processors. Intel’s next-generation “Ivy Bridge” chips will be built into ultrabooks starting in 2012.

Ultrabooks won’t be completely defined by hardware. Intel also wants to apply the idea of “performance” to content — specifically, the way people access and experience their content on Intel-based devices.

Tony Salvador, an ethnographer who heads Intel’s experience insights team, says the company sees data transmissibility as a key feature for future ultrabooks. At some point, Intel silicon will allow devices to talk to each other more easily than they can today.

“Data will flow from device to device,” said Salvador. That could mean an ultrabook would know where a user stopped reading an online article on his smartphone and bring up the story — flagging where the user left off — so the story could be finished on the PC. “Mobility isn’t just about a person moving around,” pointed out Salvador. “It can also be about data moving.”