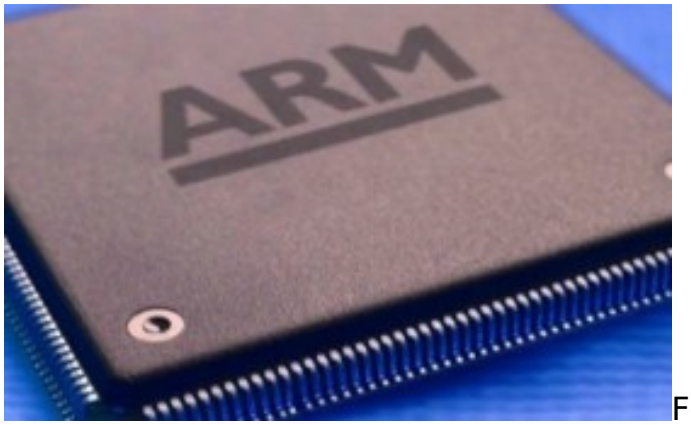
ARM Shrugs Off Intel’s First Smartphone



For the past several years, almost every smartphone, tablet or other mobile device has used a microprocessor based on the computer chip technology of U.K.’s ARM Holdings .
That has finally changed with the unveiling at CES of the first mass-market smartphone that packs Intel technology, and it definitely won’t be the last.

So how does ARM feel about the new competitor encroaching on its effective monopoly? Pretty nonchalant, actually.

At least that was the impression we got from Jeff Chu, ARM’s director of consumer client computing, when he spoke the *Mashable* at the show. Chu for the most part shrugged off Intel’s official entry into mobile computing, noting that vast swaths of the mobile ecosystem have been optimized for ARM.

“We [have] 50+ processors on the market today that are in hundreds of phone models and hundreds of different tablets, with a billion apps running on them,” Chu said. “You’re bringing something different in there — does that make sense or not? Will they have apps? Maybe. Can they win on some benchmarks? Maybe, depending on how you spin it. But does it make sense to make that change?”

Breaking ARM

Chu’s right when he says the mobile world of today all ARM, all the time. ARM doesn’t make chips *per se* — it licenses its chip architecture to chipmakers such as Samsung and Nvidia, who then make customized processors for the likes of Apple and HTC. Intel’s architecture, known as x86, is made strictly by Intel, and the company’s chips power every Windows PC shipping today.

Moving the x86 architecture over to smartphones is something Intel tried to do before, and failed. The company had big plans for its Atom line of low-power processors, but they never gained traction. This time, though, Intel has real partners in the form of Lenovo and Motorola, with the first device officially announced, the Lenovo K800, and Android phone coming to China in the spring.

I got a chance to spend some time with the K800 , and I was impressed how it rendered high-res graphics smoothly in a *Call of Duty*-style game. However, Intel itself admitted it had worked directly with the game creator to optimize performance for the phone, and it's not known if games made generally for the Android platform would run as well.

"What does x86 then bring coming down into the phone market?" Chu asks. "They're not bringing in low power consumption. They're not bringing in a new level of sophistication. What is it they're bringing in other than it's x86?"

Performance Questions

Intel would argue that it's performance. During Intel CEO Paul Otellini's keynote, he showed multiple graphs that appeared to show Intel's mobile chip (codenamed Medfield) outperforming competitors on browsing, javascript and graphics. Some independent tests appear to support the assertion. The specs don't worry Chu, however.

"I think they showed a similar chart with Moorestown (a chip that was part of Intel's previous stab at the mobile market) a couple of years ago," Chu says. "It's hard to really say what it is because there's no detail in there. But you can pick different benchmarks. It's like car commercials — greater power than X, Y and Z, and greater gas mileage than A, B and C."

The Other Battlefront: PCs

Although Chu is aloof about Intel's first smartphone, he lights up when talking about ARM-based chips taking a bite out of x86 in its traditional category — Windows machines. Microsoft had announced last year it was developing the coming new version, Window 8, for ARM devices, and announced a number of partners at CES 2012.

"The interesting thing is the PC space," says Chu. "The advantage of ARM ecosystem moving into the PC ecosystem is it's bringing in new entrants, new competition, low power consumption, always-on always connected mindset and the competition associated with it. You're bringing all of that into a space that's been highly uncompetitive for a while."

So two monopolies in electronics are being shattered: Intel's on PCs and ARM's on mobile devices. What are you looking forward to in the coming months and years in both categories?

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Posted by Janine E. Mooney, Editor

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