ARM CEO sets sights on servers, Internet of Things

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Just about everyone knows about PCs that have Intel inside. But you may actually own more devices now that have ARM inside.

And if you don't, there's a good chance you soon will.

ARM's made a name for itself by designing chips that emphasize power efficiency. Unlike Intel, it doesn't manufacture chips but licenses its designs to other companies, which can customize them for their needs.

Those qualities have made the Cambridge, U.K., company's chips a hit in smartphones and tablets. CEO Simon Segars, who works out of ARM's office in north San Jose, is betting the same advantages will give the company a leg up in new markets, including servers and the Internet of Things.

Segars recently spoke with the San Jose Mercury News about smartphones, tablets and the new markets for ARM's chips. This interview has been edited for length and clarity.

Q: In terms of how the computing market is developing, what stands out for you about last year?

A: There's a big trend around innovation. Previously if you wanted to build something, you needed a lot of scale. And now you've got low-cost electronic development platforms. You can get an ARM processor on a board for 20 bucks and plug it into your computer and get free software

tools. And you can write an app to connect to your phone for zero upfront cost, prototype something very easily, and then go and get it manufactured.

So this kind of barrier to innovation has come right down. And that's driving people to come up with ideas. So, used to be a lot of scale. Now you just need a good idea.

Q: From your perspective, what comes next with smartphones?

A: You've got an emerging trend of low-cost smartphones. There are literally billions of people who can now get access to them who couldn't have afforded them previously.

There's an opportunity to create new products and improve people's basic, fundamental way of life through having this supercomputer in your pocket the whole time. If you get that to a price point of $20, $30, then I think that opens up a new wave of innovation again.

We're seeing people building low-cost medical devices for use in the Third World - devices that use the phone for connectivity and for the screen. That will really be impactful in terms of society. So there's a whole lot of innovation that's going to go on at that end.

And at the high end, screens got bigger, you've got a phenomenal amount of compute power with you now. What's to say that in the not-too-distant future, instead of carrying two devices or three devices around, the mobile device is the thing that you carry with you? You walk in the office, you put it down, it docks with your big screen and your keyboard, and off you go.

Q: What do you think is going on with the tablet market? After a rapid takeoff, the market has slowed markedly.

A: I think like most products, they go through waves of innovation. But I think in terms of use of tablets, I think we're sort of scratching the surface there. And, again, with lower-cost devices, it means they can get used in lots of different ways.

You're seeing tablets stuck on the outside of meeting rooms in offices. They're connected, they're low cost. You can write an app that's specific for it, and you've got an interface and a bigger screen.

I was in China one time, and I got dragged into this wine store. Against each rack, there's a tablet with "here's what you're looking at." Museums are using these devices.

So I think there's a lot of applications for this small, lightweight, low-cost thing with connectivity and a screen and a user interface that feels very natural. With lower cost, people find ways to innovate with these things. The device might not necessarily change a lot, but I think the use cases can really take off, and that will drive volumes.

Q: What are the biggest opportunities for ARM chips in the next five years or so?

A: Well, there's a number of ways that we think that the market opportunity for ARM expands. The growth of low-cost smartphones is a great thing for society in general, but of course it helps our business as well.

One of the other big macro-trends is about the Internet of Things. That drives volume of chips. And I think the growth of chips with embedded processors in them is going to go on for many, many years to come.

It also drives data. And the amount of data that's being generated and consumed by phones is going up all the time. And tablets. And introduce

IoT into that mix, and you've got another factor there as well. That means that the network needs to continue evolving, and we're seeing an increase in adoption of the ARM architecture in networking equipment, so that's a growth vector for us.

And of course, all the data needs processing, storing, the information extracted from the data, and that's happening in the cloud, and that is a further opportunity for the use of our technology.

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SIMON SEGARS

Age: 47

Birthplace: Basildon, Essex, England

Position: CEO, ARM

Previous jobs: Succession of management and executive positions at ARM, including president and general manager of ARM's processor and physical intellectual property divisions. Previously, graduate engineer at STC Telecoms in England.

Education: Bachelor of Engineering in electronic engineering, Master of Science in computer science

Family: Married with one daughter and two sons

Residence: Palo Alto, Calif.

Other interests: Photography, sports, exercise

FIVE THINGS ABOUT SIMON SEGARS

1. While still living at home, he built a darkroom in his parents' garden shed and once managed to lock himself in.

2. He worked in a McDonald's while in high school.

3. His first experience with programming was on a computer that served as a display model in a local department store.

4. He got married in Las Vegas; his limo driver was one of the witnesses.

5. He is allergic to shellfish, which can make it difficult to find food during his travels in Asia.

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