

Business Update

Intel fires back in chip battle

By Ed Taylor, Tribune

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The latest attempt to topple Intel Corp. from its lofty microprocessor perch may be no more successful than previous attempts, said industry analysts interviewed by the Tribune on Tuesday.

Intel, which operates two state-of-the-art chip foundries and employs 9,500 people in Chandler, is likely to remain the king of microprocessor technology for the foreseeable future, although a new chip developed by IBM, Sony and Toshiba could become a strong force in consumer products other than the personal computer, they said.

To demonstrate its technology strength, Intel said Tuesday it will begin shipping a desktop PC microprocessor that can handle larger chunks of data than most of today's chips.

The new 600-series Pentium 4s, which will be available later this month, are the first Intel desktop chips that support a technology called 64-bit memory addressability.

Previously, Pentium 4 chips processed data in 32-bit chunks.

The new technology will result in improved performance, particularly when a computer is handling vast amounts of data such as a large database program or video editing application.

The development also will help Intel catch up with rival Advanced Micro Devices, which launched its Athlon 64 line of processors in September 2003.

On Monday, engineers with IBM, Sony and Toshiba released details of their new processor, code-named Cell, which they said surpasses Intel's chips in speed, performance and number of transistors. The Cell, billed as a "supercomputer on a chip," will initially be used inside Sony's next-generation Play-Station game console and high-end televisions by Toshiba beginning in 2006. IBM said it will sell a workstation with the chip beginning later this year.

But before everyone rushes out to sell their Intel stock, analysts said Intel still has a powerful market position in personal computers built around the x86 core architecture that it pioneered.

"You have to keep in mind that there has developed an entrenched infrastructure to support x86 over the past 25 years or so," said Tony Massimini, chief of technology for the Semico Research Corp. in Phoenix. "There is a wealth of software, and also support chips and motherboard designs, that is very well-entrenched."

To oust the x86 platform, which has about 95 percent of the computer market, any new processor design would have to either run all of the same software or be so superior in its performance that most software developers would change their products to fit the new architecture, he said.

Massimini thinks the chances are a lot better that Cell will carve out territory in other products such as video game players, set-top boxes and digital televisions.

"There are many markets available to this other than the PC market where they (Intel) are not a major player," he said.

Kevin Krewell, editor of Microprocessor Report, an industry publication, also doesn't believe Cell will have a major effect on Intel's business. Its major effect on the computer world would be if Apple Computer used the part for its workstations, he said.

"But that doesn't seem to be the main thrust of the design," he said.

Tai Nguyen, an analyst for Susquehanna Financial Group, who follows Intel and other semiconductor firms, said Intel is improving its microprocessors to match the performance of Cell by the time it reaches the market next year. And he wonders if software makers will support the new platform.

"It boils down to the operating system," he said. "They (software engineers) would have to change over to support the new type of microprocessor. That would take a long time."

Cell's designers said they are running a variety of operating systems on their processor, but they declined to say if the crucial Microsoft Windows system is one of them. They only confirmed running Linux, a popular open source system.

Will Strauss, president of Forward Concepts, a Tempebased industry research firm, said Intel has other advantages such as its highly efficient manufacturing operations that are tough to compete against. "They have huge resources in their factories. . . . To outproduce their competitors is one of Intel's secret sauces."

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