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New Pentium Line From Intel Puts Features on Hold

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Abstract (Article Summary)

As expected, the company today is overhauling its Pentium 4 microprocessor family, based on a design that exploits a new generation of production technology. Intel is announcing four chips for desktop computers based on the new design, code-named Prescott, as well as two faster chips that use the existing Pentium 4 design.

The chips operate as fast as 3.4 gigahertz, a 6% jump in frequency over Intel's fastest chip to date. Intel said the chips can perform some test calculations 14% faster than comparable older models. On a broader range of tasks, however, Prescott chips perform about the same as an original Pentium 4 at the same frequency, a company spokeswoman acknowledged.

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Full Text (533 words)

Intel Corp.'s latest chip technology brings few major benefits to computer users now. But it sets the stage for a slew of big changes.

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The new design more than doubles the number of transistors of earlier models, giving the chips twice as much built-in data-storage capacity. At a 15% reduction in size, they are less costly to manufacture. Intel is pricing the

Prescott models from $178 to $417 -- a top price that is well below the top of new product lines in the past -- and is reducing prices on some existing chips from 16% to 33%.

That is just the beginning, Intel said. William Siu, vice president and general manager of its desktop-platforms group, said the new design would allow the company to quickly roll out chips at higher frequencies, reaching four gigahertz by the end of 2004.

Other advances await a new set of accessory chips, code-named Grantsdale, that is expected during the second quarter. Features include high-quality sound and built-in features for acting as a base station for wireless networking. Intel hopes the technology will spur the creation of new "Entertainment PCs" that will be used in place of television and stereo gear in the living room.

Intel isn't discussing the most-talked-about aspects of the chips. Analysts said Prescott was built with features that aren't being activated, including a technology dubbed LaGrande that is designed to improve computer security. Another possibility is Vanderpool, a technology to allow personal computers to run multiple operating systems and to isolate computer hardware from crashes and other problems.

"There are all of these features that we know are in there," said Martin Reynolds, an analyst at market-research firm Gartner Inc.

Prescott also may include circuitry to handle 64-bit software as well as existing 32-bit programs -- a technology to match chips from rival Advanced Micro Devices Inc. -- though some analysts predict the 64-bit features will await a later chip.

Mr. Reynolds said Intel is waiting until Microsoft Corp. delivers operating software to support the new features, beginning in 2005.

Intel declined to clarify its plans. The first three chips based on the Prescott design operate at 2.8 gigahertz, three gigahertz and 3.2 gigahertz. A fourth, at 3.4 gigahertz, will be available later in the quarter.

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