Questions raised on Pentium Chips

The publisher of a Web site that posts a wealth of technical information on Intel (INTC) processors claims that the chipmaker may be facing another glitch in its processors, reminiscent of the Pentium floating-point unit bug that plagued the company a few years back. This time a bug is claimed to reside inside the Pentium Pro processor as well as the yet-to-be- announced Pentium II Chip. The Pentium II was formally unveiled on May 7 in New York.

Robert Collins, the author of Intel Secrets, a site familiar to Net users for tracking inside information about Intel processors, cited the alleged bug in a posting to the Usenet Intel user forum comp.sys.intel.

Collins wrote in his posting: I've been contacted by two prominent math professors who claim that they have discovered a major floating point bug in the Pentium Pro processor. They asked me to 72 BUSINESS TODAY June 1997 Brooke Crothers confirm whether the bug also appears in the new Pentium II processor. I ran their test and confirmed that the bug appears in the Pentium II and Pentium Pro processor, but not in the P54C (Pentium), P55C (Pentium with MMX), or AMD K6 processors." The bug is different from the Pentium bug of a few years back, Collins said in an interview with CNET, but he added that the bug could produce erroneous' data. He said this will be clarified in his report.

Along with the report he will also post computer code which anyone can download to a computer to determine if they have the bug, he said.

Regarding its impact on the typical user who has an Intel Pentium Pro or Pentium II processor, he said: 'I don't know the answer to that. You will need to talk to a numerical analyst."

An Intel representative responding on the Usenet group stated that 'the vast majority of these reported problems turn out to be unrelated to the processor, but rather a result of errors in the application, compiler, exception handler, OS, or hardware configuration.'

Collins said that the code that he came up with to test for the bug has eliminated all these possibilities.

Intel confirmed Friday that Robert Collins has been in contact with the company. ‘We saw that (posting) two or three days ago. We are trying to get him to forward the information from the professors,’ a spokesperson said today.

Right now, we are in a holding pattern,’ the spokesperson added.

“The Pentium Pro processor, like all microprocessors, has errata. These are well documented in the Pentium Pro processor specification update errata. So, it is conceivable that the error is related to the processor. However, we will need a lot more information before reaching that conclusion, the Intel representative posted to the news group said.

Some observers have cast doubt on Collins allegations. ‘Robert Collins admittedly has an axe to grind with Intel,’ said one person familiar with Collins’ statements.

Collins refuted these comments saying that he admires Intel for its ability to produce high-performance processors. He admits, however, that Intel’s methods for dealing with him in the past have been irksome at times.

Regarding the timing of the announcement, he said he wasn’t informed about the bug from his source until April 11 and he didn’t begin writing the code that tests. for the bug until April 21.