

## THE EDITORS' VIEW

# Chip Developers Eager to Share Plans

## Only Intel Hides Behind Veil—Others Have Nothing to Lose?

In the past, microprocessor vendors (like most companies) have tried to keep their future product plans to themselves. Only employees with a “need to know” had access to such information, and even key customers were not briefed until new chips were nearly complete. On-lookers such as ourselves had to rely on rumors and guesswork to predict what was ahead.

In the past year or so, a new trend has emerged. One after another, the major vendors have publicly discussed their future plans. The first such revelation came from IBM and Motorola on the occasion of announcing the PowerPC program. In addition to discussing the partnership, the two companies revealed a specific plan consisting of one chip, the 601, in 1993 to be followed by the 603, 604, and 620 in 1994. Since that announcement, IBM has revealed additional details about the chips, giving a pretty good picture of what to expect from PowerPC over the next couple of years.

Another such announcement came from Silicon Graphics last spring regarding the future of the MIPS architecture (see [0701ED.PDF](#)), including the now-announced R4400, the R5000, and something that may be called the R10000. Although the latter chip is not expected until 1995, the company felt obligated to give preliminary performance parameters. Recently, DEC presented its future plans for Alpha (see [061506.PDF](#)), upping the ante by including plans for a 1996 chip.

Other vendors are also giving peeks at their future plans, although perhaps not with the same level of completeness. Sun has a two-year roadmap (which keeps changing) for increasing the clock rate of SuperSPARC. Motorola recently pre-announced the 68060, which is not due until mid-1994. Even HP, with its quasi-proprietary architecture, felt the need to disclose its PA7100LC before the chip had even taped out, which typically means a 12-month wait before shipments begin.

Why are these vendors so willing to publicize their plans? In each case, the vendor had a specific reason in mind. IBM probably wanted to show that PowerPC would be used in a range of systems and that it wasn't giving just the low end to Motorola. SGI needed to affirm its long-term commitment to keeping the MIPS architecture open. DEC wanted to demonstrate that Alpha is not a one-shot wonder and will continue to be competitive in the future. Sun presumably hopes to convince its customers that, maybe someday, SuperSPARC will be on par with other RISC processors.

All of these rationales can be summed up in a single

statement: vendors are concerned about the viability of their architectures. Why? Because customers are concerned, and the vendors (like all good companies in the Nineties) listen to their customers. The media and various industry leaders continue to fret that there are too many different architectures and that some of them are going to “go away” in the future. Although all of the remaining players have enough resources to stay in the market for at least the next few years, customers hear these pronouncements and are worried.

To counteract this nameless dread, the processor vendors dutifully put on a dog-and-pony show to present the wonderful products that they will eventually be shipping. Over time, each vendor must reveal more and more in order to top the previous announcements. Soon, customers become addicted to this increased flow of information. “MIPS told me about their 1995 processor—what will you have to compete?” DEC, in the ultimate act of one-upmanship, claims that its Alpha architecture will last for 20 years and provide a 1000× increase in performance, presumably in the year 2012.

One player that has refused to be drawn into this game is Intel, a company with no such fears. Its customers aren't worried about the x86 architecture going away, and Intel is confident that it will continue to dominate that market. Thus, it has been cagey about its Pentium processor, even though shipments are supposedly just a few months away. Little is known about the future P6 and P7 projects other than their existence.

When vendors discuss their products years in advance, some may consider it “hype” or “vaporware.” But these discussions provide insight for potential customers making their own future plans. Instead of being limited to key customers, this information is available to all.

Such vendor disclosures must be carefully interpreted, however. Many companies give relative performance instead of SPECmarks. Some companies show product-shipment dates, while others use chip availability or even tape-out dates. Any dates must be weighed against that vendor's track record in meeting previous schedules. With some informed insight, however, the plans become more clear. Until other vendors become as confident as Intel, they will probably continue to share their plans, and we will all get plenty of practice in interpreting their meaning. ♦

