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After three years and untold amounts of speculation, it seems clear that Micro Channel is IBM's standard. And nobody else's.

When IBM's Micro Channel architecture was first announced along with OS/2 and the PS/2 line in April of 1987, many assumed that it would define a new standard for the industry. After all, hadn't the IBM PC and XT with their 8-bit buses and then the AT with its 16-bit bus done just that? Wasn't it reasonable to assume that history would repeat itself?

Although some determined souls still vigorously assert that Micro Channel will become the definitive standard, most people have noticed that something different is happening. Continued strong sales of AT-bus (now commonly called Industry Standard Architecture or ISA) systems and the emergence of powerful new EISA (Extended Industry Standard Architecture) systems offer little support for such claims.

IBM certainly has sold and continues to sell lots of Micro Channel systems. But, ominously, only a handful of other vendors have introduced Micro Channel clones, and their sales have been thoroughly underwhelming so far. Micro Channel is beginning to look much more like a semiproprietary IBM deviation than a dominant industry standard.

At the same time, EISA—which Micro Channel zealots claimed was merely a negotiating ploy to get IBM to lower Micro Channel licensing demands—is emerging as a widely supported standard, with dozens or even hundreds of system and board vendors signing up to make products for it. EISA isn't likely to overtake Micro Channel in the short run (although that's certainly a good possibility in true 32-bit implementations). But there's no doubt that sales of EISA machines will easily surpass the sales of Micro Channel clones in the months and years ahead.

What is different this time? Why has Micro Channel remained largely confined to IBM systems while the rest of the world has gone merrily on its own way?

The technical aspects of the competing alternatives are only a small part of the big picture. In its 16-bit implementation, Micro Channel systems offer no significant performance advantage over ISA systems. IBM's 286-based PS/2 Models 50 and 60 are no more than average performers, and even IBM's 386-based PS/2 Models 70 and 80 offer no better performance than comparable 386-based ISA systems. While Micro Channel's automatic configuration capabilities are certainly a plus for some users, the inconvenience of not being able to use existing ISA cards in Micro Channel systems is certainly a minus for others.

THE PROOF IS IN THE EATING

Similarly, the real distinction between Micro Channel and EISA systems isn't technical. Both bus specifications have theoretical capabilities that go well beyond anything actually being used to deliver real value to users at this point. And both have enough headroom to be more than adequate for a long time. The important difference is in the performance and function of the systems offered by vendors, which are determined not by which bus is used, but by how well each system is designed and built.

Partisans of both camps will argue these points, but the bottom line is that nearly three years after its introduction, the supposed technical

advantages of Micro Channel have yet to be demonstrated as real benefits to users. Thus, the explanation of why Micro Channel has not become an undisputed industry standard must be found elsewhere.

First, Micro Channel isn't a standard, quite simply, because IBM didn't want it to be. From the very beginning, IBM intended Micro Channel to eliminate competition from vendors of compatible systems. As early as April 1987,

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IBM made it perfectly clear that its definition of open architecture meant only that third parties could write software to run on the system or build boards to work in the system. It most definitely did *not* mean that third parties could build compatible systems to compete with IBM's.

Only after many months of steadily eroding market share did IBM grudgingly offer to license the Micro Channel patents to other vendors. Even then, the initial terms were so stiff that many vendors found them unacceptable. And the presence of bus lines "reserved for future use" in the original specification made it obvious that IBM planned future versions of Micro Channel.

Third-party vendors planning Micro Channel clones knew that they were likely to find themselves in an ongoing game of catch-up, as IBM introduced enhanced versions of the Micro Channel bus. Further, simply licensing the Micro Channel patents did not guarantee that they could build truly compatible Micro Channel systems capable of running future versions of IBM's OS/2 Extended Edition. Yet users would be unlikely to purchase clones without the assurance of such compatibility.

Which brings us to the most important reason why a lively Micro Channel clone market has not developed. Users have bought Micro Channel mainly because that's what IBM offers. That is, users don't first decide they want Micro Channel and then buy an IBM machine; they decide to buy an IBM and thus buy Micro Channel by default.
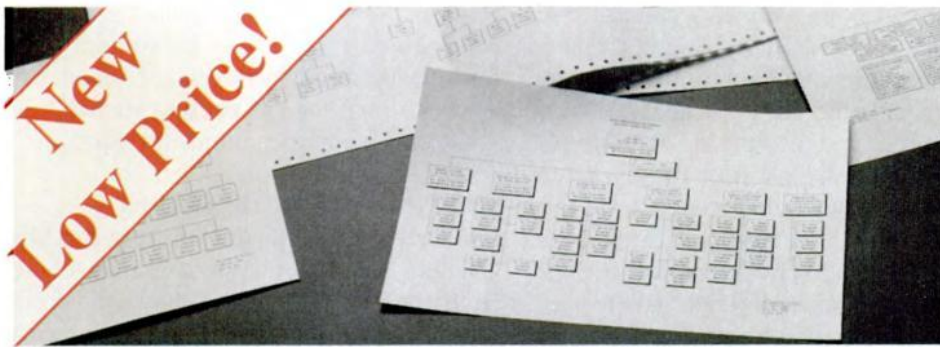
Buyers who think they are better off buying Micro Channel already think they're better off buying IBM, and they aren't likely to settle for a clone from somebody else. And buyers prepared to consider purchasing PCs from other vendors already know that they can get better performance at lower prices than PS/2 systems offer. They know better than to believe IBM's "country road and superhighway" stuff in the first place.

MOST EVERYONE WINS

All of which adds up to lots of good reasons for most vendors to continue making ISA systems—and to make EISA their primary choice for more-capable 32-bit systems in the future. This strategy will let them avoid playing IBM's game by IBM's rules. It lets them concentrate on delivering the most value to users, instead of wasting their resources tagging along after IBM.

Users are the real winners, as usual, when there's intense competition among vendors. The impressive rollout of EISA products over the past few months has stimulated IBM to make greater efforts to bring products that take advantage of Micro Channel from the vapor zone into the reality zone. We now have our choice of a wide and growing range of ISA, EISA, and Micro Channel systems to meet our various needs.

At the same time, Micro Channel clones are looking more and more like an idea that simply never saw its day. They are likely to remain an insignificant element in personal computer sales, as Micro Channel becomes merely the IBM alternative and EISA becomes the standard for everyone else. ∎