A Quiet Revolution at Intel

Like the Rest of the World, Intel Is Moving from PC-Centric to Net-Centric

Looking at Intel's financial results, it is apparent that the vast majority of the company's revenue and profit comes from PC microprocessors. Yet if you look at the investments, acquisitions, and other announcements Intel has made just since the start of this year, a very different picture emerges. Like the world around it, Intel is moving from PC-centric to Internet-centric, and the sheer number and rate of the new developments is striking.

It will be years, if ever, before PC processor revenues cease to be the major source of Intel's income. But Intel's market share in the PC processor business can't increase dramatically, and its average selling prices are more likely to go down than up. Thus, the core of Intel's business is unlikely to grow much faster than the PC industry itself—and that's not good enough to sustain Intel's ambition.

Some of Intel's investments follow its long-standing approach of backing projects that promise to increase the PC market. An example of just how far Intel will go is the "Intel Play" (toys that are PC peripherals) line it is developing with Mattel. Intel also has pursued a variety of developments to advance digital photography, which makes a superb PC application (see MPR 7/12/99, p. 23); it collaborated with Kodak on Picture CD, for example, aiming to bridge traditional film cameras and digital processing.

Most of Intel's external investment activity, however, is connected to the Internet in one way or another. Intel's increasing efforts in the server market, which have been under way for many years now, are its largest foray. Big servers are a part of the computing business where Intel is weak today, but with the growth of the Web, server farms are sprouting like mushrooms. Some of Intel's investments in this area include Corollary and NCR's server group.

In addition to the billions of dollars of internal investments the company is making in IA-64, earlier this year it founded a $250 million IA-64 venture-capital fund (which includes other investors). The fund's first investments include companies developing database, speech recognition, and CAD software.

Seeking new avenues in which to sell its servers and other equipment, Intel established a program to sell servers and networking equipment to ISPs. And Intel is getting into the ISP business itself: Intel plans to build a series of data centers, with thousands of servers in each, that it will run as "bit factories" for large customers delivering compute- and storage-intensive services via the Web.

Extending its server reach in different ways, Intel spent about $780 million to acquire Dialogic, a manufacturer of software and interface hardware for computer-telephony systems. Intel will provide the servers for these products.

Then there are communications-related expansions of Intel's semiconductor business. Intel's $2.2 billion acquisition of Level One Communications makes it an instant leader in communication ICs for high-speed telecommunications and networking. Intel also acquired Softcom Microsystems, which makes silicon for ATM and SONET equipment.

Intel expanded its networking business with the acquisition of Shiva and recently announced plans to make ADSL modems. Among many other efforts are a collaboration with Hughes to build satellite set-top boxes; with PBS to deliver enhanced digital TV content; and with Proxim to advance wireless home networking. Most recently, Intel invested $50 million in Pacific Century CyberWorks to deploy high-speed Internet services to Intel-based set-top boxes in Asia.

Even Intel's processor lineup is changing as a result of the new focus. In the case of the x86 line, Pentium III is being heavily pushed as enhancing the Internet experience—despite a paucity of substance behind the claim. More significant, Intel's nearly accidental acquisition of StrongArm gave the company an outstanding processor with which to pursue communications equipment. Going a step further, Intel is developing a "network processor," which remains only vaguely defined but will be aimed at routers and other infrastructure equipment. And the company entered into a joint effort with Analog Devices to create a new DSP architecture, rounding out the spectrum of processors it might need for virtually any communications-related application.

Although Intel's preeminence today is based on the overwhelming success of a single microprocessor architecture, the company's vision for the future is much broader. Intel's server and communications investments may provide the engine for growth, should the PC market falter—and they make the company less vulnerable to a collapse in pricing for PC microprocessors.

As Intel moves in so many directions, the company is spreading itself so thin that it will surely blunder in some areas. It will also face many competitors in each new area, and rarely will it have the advantage of a powerful architectural franchise. But Intel has wisely, yet quietly, stopped its rallying cry of "the PC is it," while it quickly prepares for a new era. Ⓜ

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