Between 2005 and 2010, the pace of computing technology advancement dictated by Moore's law will slow, most people will access the Web through wireless telephones that contain supercomputers, and the graphical user interface will be on its way out. How will Wintel survive? Who and what will drive the economy?

I predict that the next strategic inflection point—a change so profound it fundamentally alters the way we do business—will be the service industry's complete domination of the economy. Within the next five years, spending on information technology will exceed all other forms of capital equipment spending, as Figure 1 shows. Most of this money will be lavished on e-commerce. If this trend continues, by the year 2010 most of the US economy—and soon the rest of the world—will depend on the Internet. Although e-commerce currently accounts for only about 2 percent of the US's gross domestic product, Figure 2 shows that at current growth rates it will consume every other form of commerce by 2020. The most successful e-commerce businesses will focus on service.

ARE YOU BEING SERVED?

A massive shift toward service businesses is reshaping the computer industry. For example, many companies—including AboveNet, Exodus, and SAP—are moving into Web hosting, quickly adapting to customer demand for services and support. The IBM Global Services division has become IBM's cash cow. The Yankee Group forecasts the US Web-hosting business will rise from $3 billion in 1999 to $15 billion by 2003. Outsourcing of IT functions has become epidemic. But Web hosting alone isn't enough for most companies. They want to rent the applications as well as the hardware on which those applications run. So far, the computer industry has done an excellent job of selling bits. But that expertise won't automatically translate to the service economy. Instead of owning bits, customers in the 2005 to 2010 timeframe will simply borrow bits from service providers. To accommodate this shift, SAP invented MySAP, and other enterprise-resource-planning vendors are moving quickly into rent-a-bit mode. Future customers will soon prefer to rent large, expensive, and complex software via the Internet, rather than buy, install, and run the software themselves.

Today's fast companies comprise a new breed of service provider that manages hardware and software applications via network connections for midsize and large enterprises. By 2005, they will move downstream to the mom-and-pop e-stores. For example, USInternetworking of Annapolis, Maryland, offers managed care of enterprise applications; Netledger of Menlo Park, California, rents accounting applications to midsize companies; and I-N-O-C.com of Jacksonville, Florida, already serves as an application service provider (ASP) for small and midsize customers.

The service inflection point is fast approaching in all application software segments, not just enterprise resource planning. ASPs have been quick to jump on the application outsourcing bandwagon.

Figure 1. IT spending as a percent of all capital equipment spending in the US. Source: Data points from the US Department of Commerce.
wagon, which Forrester Research (http://www.forrester.com/) projects will grow from $150 million in 1998 to $6 billion in 2001. Asha May of Dataquest says the market will grow to $22 billion by 2003 ("Office 2000 For Rent," San Jose Mercury News, 10 Nov. 1999, p. 4c). Figure 3 suggests an adoption curve that tops the growth rate of the aggregate computer industry and that will, if it holds, change the entire industry.

A GIANT VENDING MACHINE

Whatever else it may be, the Web is the largest vending machine ever conceived and built by humans. Service vending will exploit the Web best, hence the service inflection point that awaits us. Plan on seeing more businesses like Ariba’s electronic procurement chain. Ariba provides a single source for office products and streamlines the purchasing process, freeing its client businesses from setting up a Web-based procurement site. Clients only need register with the Ariba site to automatically become a buyer and seller. Ariba’s infrastructure handles all the back-office and billing transactions.

MVX.com does the same thing for the telecommunications services industry. MVX has developed relationships with wholesale vendors so that its customers don’t have to. The company lays out frame relay, Internet access, T1 connection, xDSL, and voice packages like so many chips and candy bars. “Companies are saving 20 to 30 percent off their telecom costs by using the service,” says Jeff Richards of MVX.com (Tim Wilson, “Firm Webifies Purchasing of Data, Voice Services,” InternetWeek, 8 Nov. 1999, p. 9).

i2 Technologies pushes the vending machine analogy even further. Its TradeM atrix, designed to mesh with other supply-chain portals, integrates supply-chain forecasting and collaboration into an online vending machine for networks of networks. Given such tools, TradeM atrix’s network could become a web of interlinked trading partners. These partners will employ a revenue-sharing business model, so instead of owning its own e-commerce portal, the typical e-commerce business of 2005 will participate in a global supply chain. These toll roads will charge a fee: Bits will be taxed, not owned.

RENT-A-BIT DEAD ENDS

Rent-a-bit businesses may encounter resistance from certain industry segments, however. For one thing, because data has become more valuable than applications, many companies are reluctant to let their databases leave the building. If outsourc-
ing is ever going to work as predicted, businesses must be confident that their exported data will be in good hands.

Further, many routine applications may never move off the desktop and onto a network. Microsoft announced in November 1999 that it would rent its Microsoft Office suite to network-centric consumers. Corel already rents WordPerfect for only $9.95 per month, while Sun Microsystems began giving away its newly acquired StarOffice suite in August 1999. Although Sun really intends to sell its Sun Ray thin-client hardware with its StarOffice ploy, something-for-nothing is a compelling price.

Gene Banman, vice president and general manager of information appliances at Sun Microsystems says, “hosted application services will replace boxed software sales altogether in the next decade.” (“Office 2000 For Rent,” San Jose Mercury News, 10 Nov. 1999, p. 4C). “In the future, there won’t be applications, there will be network services,” Banman explains.

Giveaways and other desperate acts by industry leaders will intensify as these companies strive to look like service businesses instead of box builders and shrinkwrap merchants. They don’t want to be left behind when the next strategic inflection point sweeps the industry.

I suspect both these rent-a-bit schemes will fail, though, because even the most naive computer user wants his or her own full-fledged PC loaded with a local copy of routine office productivity software. Users are unlikely to wait for Microsoft Office—which could run 100 M bytes or more—to download. Similarly, thin clients, like SunRay, are simply a dumb idea—they have no memory, disk, or Wintel OS.

The vending machine paradigm works so well because supply chains have become electrified. Ariba, CommerceOne, and i2 aim to link any kind of buyer with any kind of seller via the Web—and CommerceOne is gaining on the field. Given the compelling convenience of built-in billing and payment, why would anyone want to reinvent their own wheel?

Supply chains are as subject to the law of increasing returns as are other network businesses. The more buyers and sellers in the chain, the more valuable it becomes. Ultimately, such an increasing-return business amasses a monopsonistic market share. Once it achieves market dominance, customers are unlikely to shop for a better trading partner. Like IBM in the 1980s and Microsoft in the 1990s, 2010’s dominant electronic value chain may be deemed a monopoly. Will one of these service chains then become the target of a US Department of Justice monopoly case? I’d bet on it.

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