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I.B.M. SAID TO PUT ITS PC BUSINESS ON THE MARKET

END OF ERA IN COMPUTING

Company Seeks to Stress Corporate Servers and Computer Services

By **ANDREW ROSS SORKIN**
and **STEVE LOHR**

International Business Machines, whose first I.B.M. PC in 1981 moved personal computing out of the hobby shop and into the corporate and consumer mainstream, has put the business up for sale, people close to the negotiations said yesterday.

While I.B.M. long ago ceded the lead in the personal computer market to Dell and Hewlett-Packard so it could focus instead on the more lucrative corporate server and computer services business, a sale would nonetheless bring the end of an era in an industry that it helped invent. The sale, likely to be in the \$1 billion to \$2 billion range, is expected to include the entire range of desktop, laptop and notebook computers made by I.B.M.

The retreat from the business may be the ultimate acknowledgement that the personal computer has become a staple of everyday life, a commodity product, yielding very slim profits. The companies that make the most money from PC's these days are Microsoft and Intel — whose software and chips are the standard for most of the personal computers sold, regardless of the maker.

According to the people close to the negotiations, I.B.M. is in serious discussions with Lenovo, China's largest maker of personal computers, and at least one other potential

buyer for the unit. Lenovo was formerly known as Legend.

A spokesman for I.B.M., Edward Barbini, said last night, "I.B.M. has a policy of not confirming or denying rumors."

If I.B.M.'s personal computer business ends up being sold to Lenovo, it would continue the migration of high-technology manufacturing to China and Taiwan.

In the 23 years since I.B.M. lent its prowess in mainframe computers to

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the production of desktop machines, it has been widely criticized for having destined the machines to commodity status by giving Microsoft and Intel the rights to those essential standards. And although Apple Computer holds less than 4 percent of the personal computing market worldwide, it has been able to command relatively high prices and richer profits because it has controlled the software and hardware that goes into its machines.

A sale of the personal computer business would be a step away from I.B.M.'s traditional emphasis on the size of its revenue as a measure of its corporate power. The PC business represents about 12 percent of I.B.M.'s annual revenue of \$92 billion.

For nearly a decade, though, some industry analysts have urged I.B.M. to get out of that business as it made only a modest profit or lost money. For this year, analysts have expected a pretax profit of less than \$100 million.

I.B.M. executives long resisted that course, arguing that personal computers were technology products its corporate customers wanted. It held on to the business on the theory that it helped hold on to customers.

But in the most recent quarter, I.B.M. ranked a distant third in worldwide PC sales, with 5.6 percent of the market, according to Gartner, the market research firm. Dell was the leader with 16.8 percent of the world market, and Hewlett-Packard, which has absorbed Compaq Computer, had 15 percent.

A sale now, if it happens, would be consistent with the strategy pursued by Samuel J. Palmisano, who became I.B.M.'s chief executive early in 2002. He has sold hardware businesses where profits were slender and growth prospects were limited, like its hard disk drive business, which was sold to Hitachi.

Instead, Mr. Palmisano has bet on expanding the company's services business, automating a full array of operations — from product design to sales-order processing — for corporate customers. I.B.M. now casts itself as a company that does not simply sell technology but serves as a consulting partner to help its customers use technology to increase the efficiency and competitiveness of their businesses. As part of that strategy, he bought PricewaterhouseCoopers Consulting for \$3.5 billion, in a deal that closed in October 2002.

"Palmisano's getting out of businesses that aren't growth opportunities and concentrating on what I.B.M. does best," said Mark Stahlman, an analyst at Carris & Company. "PC's are not where the growth



Mike Mergen/Bloomberg News

A sale of the unit, should it materialize, is expected to include the entire range of desktop, laptop and notebook computers made by I.B.M.

is."

To trim costs, I.B.M. has steadily retreated from the manufacture of its PC's. In January 2002, it sold its desktop PC manufacturing operations in the United States and Europe to Sanmina-SCI, based in San Jose, Calif. I.B.M. now confines its role in PC's to design and product development out of its offices in Raleigh, N.C., with all the I.B.M.-brand desktop or notebook computers made by contract manufacturers around the world.

Leslie Fiering, a research vice president at Gartner, has predicted consolidation in the PC industry over the next few years.

"Exiting the market may be the only logical choice for global vendors bleeding profits and struggling for share," she wrote in a recent research report. And she noted that Hewlett-Packard, a broad-based technology company where PC's are only part of a much larger business, might face pressures similar to I.B.M.'s.

"The PC divisions of H. P. and I.B.M." Ms. Fiering wrote, "are vulnerable to being spun off if their drag on margins and profitability are deemed too great by their parent companies."

In the meantime, she said, Asian vendors like Lenovo "appear well positioned to leverage their strong local-market standing and low-cost operating models into a global presence."

Asia has increasingly become a major hub for technology manufacturing. More and more chip making is done in the contract factories, like Taiwan Semiconductor, and at new foundries in China.

Still, in the semiconductor industry, Intel and I.B.M. still have big factories in the United States, and Advanced Micro Devices, Intel's most

PC Shipments

Includes desktops, notebooks and servers.

UNITED STATES	1,000's	
	UNIT SALES	MARKET SHARE
Q3, '04		
Dell	5,023	32.8%
H.P.	3,133	20.5
Gateway	800	5.2
I.B.M.	797	5.2
Toshiba	561	3.7
Apple	510	3.3
Sony	295	1.9
WORLDWIDE		
Dell	8,050	18.0%
H.P.	7,176	16.1
I.B.M.	2,696	6.0
Fujitsu	1,735	3.9
Acer	1,620	3.6
Toshiba	1,619	3.6
NEC	1,221	2.7

Source: IDC WW Quarterly PC Tracker

prominent rival in chip making, has a leading-edge plant in Germany.

Personal computer making has followed the same path to Asia, especially in the case of notebook machines made in China and Taiwan. Lenovo has had long ties with I.B.M. It got its start in 1984 as a distributor of personal computers from I.B.M. and AST, the Taiwan PC maker.



I.B.M.

An I.B.M. ad campaign that ended in 1987 — seen then as an effort to soften the company's image — featured a Charlie Chaplin look-alike.

Business Day

The New York Times

SATURDAY, DECEMBER 4, 2004

An Unknown Giant Flexes Its Muscles

Amid Talk of Deal With I.B.M., Lenovo of China Sheds Some Obscurity



Around the World In One Laptop

Personal computers that have the I.B.M. name on them are built from an international array of components. Here is a look inside an I.B.M. ThinkPad X31 selling for \$2,349.

ASSEMBLY

Mexico.

MEMORY

10 manufacturers worldwide, the largest in Korea.

COST 512 megabytes for about \$60.

CASE AND KEYBOARD

Made in Thailand.

COST \$50.

WIRELESS CARD

Intel. Made in Malaysia.

COST If not packaged with the microprocessor, \$15 to \$20.



Costs are estimates of what manufacturers pay for components.

DISPLAY SCREEN

Two of the major screen makers are Samsung and LG Phillips in South Korea.

COST A 15-inch screen is about \$200; 17-inch about \$300.

GRAPHICS CONTROLLER CHIP

ATI. Made in Canada. TSMC. Made in Taiwan.

COST \$30 to \$100.

MICROPROCESSOR

Intel. Made in the U.S.

COST Intel's Centrino chip includes wireless capabilities, \$275 to \$500.

HARD DRIVE

Made in Thailand.

COST Laptop hard drives range from \$1.50 to \$2 a gigabyte. A typical drive is about 40 gigabytes.

BATTERY

Made in Asia to I.B.M. specifications.

COST \$40 to \$50 for a typical laptop battery.

Sources: IDC; Portelligent Inc.; Stanford University

Photographs by Earl Wilson/The New York Times (computer) and Ricky Wong/Bloomberg News; photo illustration by The New York Times

By DAVID BARBOZA

SHANGHAI, Dec. 3 — Lenovo. Who?

Although virtually unknown in the United States, Lenovo — said to be in talks to buy I.B.M.'s personal computer business — is China's largest PC maker and the world's fastest-growing one. And it is emblematic of the ambitions of emergent Chinese industrial giants to create global brand names and capture market share beyond their own borders. Formerly relegated to a low profile as the cheap assemblers for the rest of the industrialized world, Chinese companies now have their sights set on becoming global powers in their own right.

The **Lenovo Group**, partly owned by the Chinese government, had sales of over \$3 billion last year and is currently ranked eighth globally among PC makers. It is the overall leader in Asia outside

Japan, where NEC and other Japanese companies dominate. (I.B.M.'s Japan unit is in the top five there, though, adding to I.B.M.'s allure for Lenovo.)

Based in Beijing and listed on the Hong Kong Stock Exchange, Lenovo has made its mark by producing a line of low-cost PC's, some selling here in China for as little as \$360. With huge sales to Chinese government agencies and schools, and immune from the tariffs levied against foreign brands like Dell, Hewlett-Packard and — so far — I.B.M., Lenovo now controls about 27 percent of the Chinese PC market, which is about to pass Japan to become the world's second-largest personal computer market after the United States.

But the company is experiencing growing pains as it tries to hold onto market share at home while also venturing into Western

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markets.

The company's stock price recently plummeted after Lenovo reported worse-than-expected earnings, citing a price war in China with **Dell, Hewlett-Packard** and I.B.M.

Lenovo may not end up acquiring I.B.M.'s PC business, as at least one other potential buyer is also in negotiations. And other bidders may emerge.

But if Lenovo succeeds, acquiring the I.B.M. unit would ease some of the competitive pressure domestically. Recognizing that profitable growth within China may be increasingly hard to come by as outsiders flock to the world's potentially biggest consumer market, Lenovo also knows it needs to expand its global share of the market beyond its current 2.6 percent. Acquiring the I.B.M. business, now ranked third globally, would raise that share to 8.6 percent — still third, but a bit closer to Dell (18 percent) and Hewlett-Packard (16.1 percent).

As part of its global campaign, the company earlier this year shed its longstanding name, Legend, in favor of the current one, then promptly entered the global brand sweepstakes by signing on as a sponsor of the 2006 Winter Olympics in Turin and the 2008 Olympic Games in Beijing.

To what extent, and for how long, Lenovo or another buyer of I.B.M.'s PC business would be able to make use of the I.B.M. name would be a crucial question in any negotiations. But the company has made it known that it is open to deals. "Acqui-

Keith Bradsher, in Hong Kong, and John Markoff, in San Francisco, contributed reporting for this article.



Shen Yu/Imaginechina

China is on the brink of passing Japan to become the world's second-largest personal computer market after the United States.

sition is one of the possibilities," Mary Ma, Lenovo's chief financial officer, said in an interview last year. Founded in 1984 by a group of Chinese scientists with government financing, the company then known as Legend started out as a distributor of computers and printers, selling I.B.M., AST and Hewlett-Packard models in China.

In the late 1980's, however, as an exemplar of a trend that would play out in many Chinese industries, the company moved higher up the food chain by beginning to design its own personal computers. By 1997, it had passed I.B.M. to become the largest seller of personal computers in China.

But competing globally on its own, especially against Dell's vaunted manufacturing efficiencies, could be a stretch for Lenovo. An American venture capitalist who recently toured the Lenovo factory in Shanghai said that he had been surprised that it lacked the bustling, just-in-time urgency that he had observed on a similar tour of a Dell assembly line in Round Rock, Tex.

At the Lenovo site, pallets of computers were stacked high to the ceiling, according to the investor, who insisted on not being identified, and he said the production line was

moving slowly compared with Dell's.

Moreover, with China's economy growing rapidly, increasingly affluent and brand-conscious people are turning to Dell, I.B.M. and Hewlett-Packard computers. Executives at Lenovo are intent on competing with those better-known brands, saying Lenovo is not interested in simply being known as the lower-cost supplier. I.B.M.'s product line would automatically push Lenovo up the cachet curve.

Most crucial to Lenovo's worldwide aspirations, analysts say, would be I.B.M.'s ThinkPad line of portable computers, which even among American customers has a much more devoted following than many of the other products in I.B.M.'s line.

"This is their steppingstone to a global market," said James Mulvenon, a China researcher who is deputy director of the Center for Intelligence Research and Analysis, a Washington research center.

Otherwise, he said, Lenovo faces the same brand-recognition problem that has plagued the Taiwan computer maker Acer, which ranks fifth globally, but is an also-ran in the United States market. "This is a story about a Chinese company adopting an American brand," Mr. Mulvenon said.

Business Day

The New York Times

SATURDAY, DECEMBER 4, 2004

Contemplating a PC Market Without I.B.M.

By GARY RIVLIN
and JOHN MARKOFF

SAN FRANCISCO, Dec. 3 — Inside Hewlett-Packard, the world's second-largest personal computer maker, executives greeted the news on Friday that I.B.M., the world's No. 3 PC maker, might be retreating from the market, with good cheer.

Executives at Dell Computer, the largest personal computer maker, would not comment, but some industry analysts speculated that they too were smiling about I.B.M.'s decision.

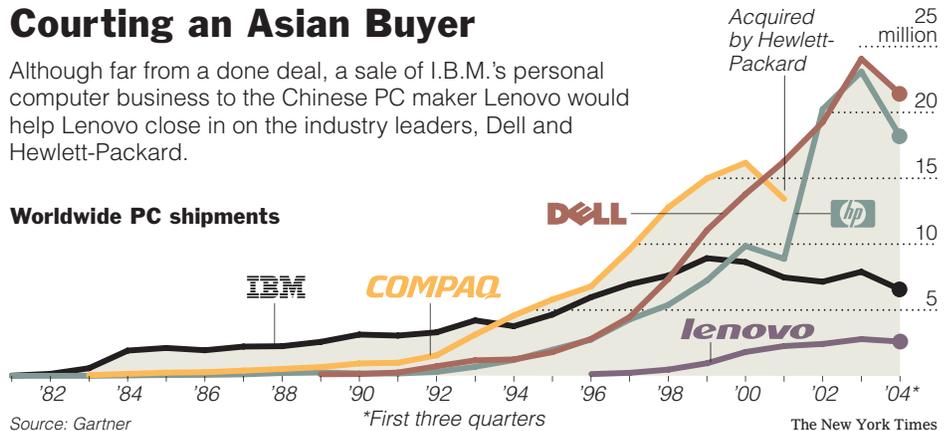
Still, many in the industry were concerned that an I.B.M. withdrawal could accelerate competition in an industry where prices were already falling.

According to people close to the negotiations, I.B.M. is in serious discussions to sell its PC business to Lenovo, the largest maker of PC's in China — a rapidly expanding market that Hewlett-Packard and Dell covet. I.B.M. is in talks with at least one other potential buyer. Industry experts note that

Courting an Asian Buyer

Although far from a done deal, a sale of I.B.M.'s personal computer business to the Chinese PC maker Lenovo would help Lenovo close in on the industry leaders, Dell and Hewlett-Packard.

Worldwide PC shipments



a sale to Lenovo may create a powerful new rival with operations based in China.

Alan Promisel, an analyst at the research firm I.D.C., said a deal with Lenovo "would put up a significant roadblock to Dell and H.P.'s Asia Pacific expansion, at least potentially so." Mr. Promisel and others noted that a larger Lenovo, formerly

known as Legend, could have the power to further squeeze down PC prices because of its track record as a producer of low-cost machines.

"If they're able to complete a deal," Mr. Promisel said, "Lenovo is obviously going

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to be more aggressive on the pricing front, which could lead to a compression on price points in the industry," potentially eating into the profits of every PC maker. The price for I.B.M.'s personal computer unit is likely to be \$1 billion to \$2 billion. A buyer would be purchasing the blueprints to the ThinkPad, generally regarded as the world's most reliable and secure laptops.

"The ThinkPad isn't just the best machine for the price," said Richard Dougherty, director of the Envisioning Group, a market research firm in Seaford, L.I. "It is the machine for anyone concerned about security."

A buyer would presumably get the ThinkPad name and also I.B.M.'s customer list, but whether that would be worth much over time remains to be seen. According to people close to the negotiations, a buyer is also likely to get the use of I.B.M.'s brand name on PC's for a transitional period and I.B.M. may continue to sell the computers to corporate customers after the business unit is sold.

Mr. Dougherty said he was already hearing from I.B.M. customers fretting about a sale to a company that has specialized in low-price machines. "Customers are saying, 'Oh my God, we need to be assured we can get ThinkPad models that are just as secure and reliable, and not just a watered-down ThinkPad brand from Lenovo,'" Mr. Dougherty said.

While Hewlett and Dell may benefit from that uncertainty, they may not necessarily benefit over the long term. I.B.M.'s retreat from the PC sector may be an irreversible transition from a world where corporate workplaces have personal computers on each desktop to one where corporate offices run on centralized computer systems with simple monitors on desks known as "thin clients" that have network connections.

This transformation would tend to harm Hewlett more than Dell, industry analysts said, because Hewlett, like I.B.M., is stronger in the corporate market than Dell, which sells the bulk of its computers to consumers. I.B.M.'s potential withdrawal from the desktop computer business indicates it has concluded that growth in corporate PC sales is largely over.

"If I.B.M. is getting out of the business because it can't make money, then investors will ask themselves, 'What does I.B.M. know that H.P. doesn't know?'" said Andrew Neff, an analyst with Bear Stearns.

And even for I.B.M., backing away from traditional personal computers now may not help, said Jonathan Schwartz, president of Sun Microsys-



Dell Computer accounted for 18 percent of PC sales worldwide in the third quarter of 2004.

tems, one of I.B.M.'s top competitors. "We've been in the post-PC era for four years now," Mr. Schwartz said, noting that last year a billion wireless handsets were sold compared with 100 million personal computers.

But Duane Zitzner, the executive vice president in charge of Hewlett's personal computer business, notes that the sector remains profitable, with Hewlett earning \$210 million on PC's in the fiscal year that ended in October.

Moreover, Mr. Zitzner said I.B.M.'s retreat provides a golden opportunity for his company. "Any time there's a change like this, it adds a level of uncertainty among customers buying equipment," he said.

Dell accounted for 18 percent of PC sales — including laptops — worldwide in the third quarter of 2004, according to I.D.C., compared with Hewlett's 16.1 percent market share. I.B.M. was a distant third at 5.2 percent. I.B.M.'s sales are almost exclusively to corporate buyers, with most of those buyers being customers who also buy other equipment and services from I.B.M.

While Hewlett and Dell are expected to compete vigorously for I.B.M.'s corporate market, there is evidence this market will shrink over time.

The "thin client" concept has been debated in the industry for more than a decade. In the past, skeptics of that concept pointed to the PC's flexibility and convenience, as well as to the problems with mainframe computing.

Today, however, a number of factors ranging from the explosive growth of the Internet to increased computer and data security concerns are shifting the equation. Man-

Top PC Makers

Based on worldwide shipments, through the first three quarters of 2004.

	SHIPMENTS, IN MILLIONS	MARKET SHARE
Dell	23.0	18.3%
H.P.	19.8	15.7
I.B.M.	7.6	6.0
Fujitsu	5.1	4.1
Toshiba	4.2	3.4
Acer	4.2	3.4
N.E.C.	3.5	2.8
Lenovo	2.9	2.3
Gateway*	2.9	2.3
Apple	2.5	1.9

*Includes sales of eMachines, which Gateway bought in the first quarter.

Source: IDC

The New York Times

aging viruses and worms is easier on centralized systems, and software development is increasingly shifting to applications based on Internet-based standards.

"The days of the \$3,000 desktop personal computer are over in the corporate world," said Terry Garnett, a venture capitalist who is a partner at Garnett & Helfrich Capital, based in Menlo Park, Calif. "This is a paradigm for the future and a signal of where things are going."

That trend has been reflected in recent analyst reports. On Thursday, for example, Rebecca Runkle, an analyst at Morgan Stanley, lowered her 2005 growth forecast for PC unit sales by 2 percentage points, to 9 percent. She noted that consumer, small-business and government markets all slowed late this year.

In May, I.B.M. began offering a thin software application called Workplace — based on the Java programming language — intended for Web-based computing where data is managed and stored centrally.

I.B.M. is betting that such systems will be increasingly attractive to corporate customers and will consequently diminish the once mighty personal computer business.

The New York Times

NEW YORK, WEDNESDAY, DECEMBER 8, 2004

Sale of I.B.M. PC Unit Is a Bridge Between Companies and Cultures

By STEVE LOHR

I.B.M. announced late yesterday the sale of its personal computer business to Lenovo, China's largest personal computer maker, a deal that reflects the industrial and economic ambitions of not only the two companies but also their two nations.

Under Lenovo's ownership, the I.B.M. personal computer business will continue to be based in the United States and run by its current management team. I.B.M. will take a stake of 18.9 percent in Lenovo, which is based in Beijing but plans to have headquarters in New York.

The significance of the deal may exceed the relatively modest amount that Lenovo is paying: a total of \$1.75 billion in cash, stock and debt.

The transaction — The Times re-

ported late last week that I.B.M. had put its PC business up for sale — points to the rising global aspirations of corporate China as it strives to become a trusted supplier to Western companies and consumers. The sale also signals a recognition by I.B.M., the prototypical American multinational, that its own future lies even farther up the economic ladder, in technology services and consulting, in software and in the larger computers that power corporate networks and the Internet. All are businesses far more profitable for I.B.M. than its personal computer unit.

But the move signals an acknowledgment by I.B.M. that its future in China may be best served by a close partnership with a local market leader — particularly one, as in Lenovo's case, that is partly owned by the Chinese government. The chief executive of Lenovo will be Stephen M. Ward Jr., currently an I.B.M. senior vice president in charge of the PC business. Lenovo's current chief and president, Yang Yuanqing, will become Lenovo's chairman.

American companies, in one industry after another, are scrambling to take advantage of the vast potential of the Chinese market. Chinese companies like Lenovo, meanwhile, are increasingly seeking to tap into over-

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seas markets, management expertise and technological skills.

"This is an encouraging sign of the increasingly sophisticated trans-Pacific ties between the United States and China," said Timothy F. Bresnahan, an economist at Stanford University. "Seeing the Chinese seeking these kinds of economic links can only be a good thing."

The complex transaction is meant to serve as a bridge between very different companies from different cultures, by seeking to ensure that I.B.M. has a stake in the Chinese company's success. Whether in the United States, in China or anywhere else in the world, such a stake would be in I.B.M.'s self-interest; a messy exit from the personal computer industry could rankle corporate customers, hurting I.B.M.'s other businesses, and tarnish its stellar brand name.

I.B.M. has agreed to hold onto its stake in Lenovo for three years, the companies said, with an option of extending it. I.B.M.'s financial commitment to Lenovo could help open doors for its efforts to win other business in China.

The senior management of the current I.B.M. personal computer business will join the Chinese company, led by Mr. Ward and Fran O'Sullivan, the general manager of I.B.M.'s personal computer division.

Besides management expertise, Lenovo would be acquiring five-year brand-licensing rights to a computer business best known for its I.B.M. Thinkpad notebooks, its sleek black desktops and the product line's distinctive tricolor I.B.M. logo.

While Lenovo will have its headquarters in New York, the hub of the I.B.M. PC business is in Raleigh, N.C., where its design and development operations are based. I.B.M.

Andrew Ross Sorkin, in New York, and Gary Rivlin, in San Francisco, contributed reporting for this article.



Bruce R. Feeley for The New York Times

The senior management of the current I.B.M. personal computer business, led by Stephen M. Ward Jr. and Fran O'Sullivan, will join Lenovo.

employs about 10,000 people worldwide in its PC business, although fewer than a quarter of those workers are in the United States. In fact, 40 percent already work in China.

Under the agreement, I.B.M. will continue to handle technical support, financing and warranty coverage globally for its former personal computer division. Those tend to be steady and profitable cash-generating businesses, even as the PC business itself has been only intermittently profitable for I.B.M. lately.

It was I.B.M. that moved the personal computer industry from a hobbyist market into the corporate and consumer mainstream with its first PC in 1981. But as the company lost its PC market leadership to nimbler players, the company has pulled back its commitment to the business, first by getting out of retail sales and, in 2002, passing off its desktop PC manufacturing to a Silicon Valley contractor, Sanmina-SCI.

Today, I.B.M. is a distant third in worldwide PC market share, behind Dell and Hewlett-Packard. I.B.M.'s

personal computer sales are about \$10 billion a year, or about 11 percent of its \$89 billion in revenue, but it has hovered between slight profits and losses in recent years.

In its hasty entry into the PC business in the early 1980's, I.B.M. made what turned out to be a strategic mistake: it chose outside suppliers for the crucial technologies of the micro-processor and the software operating system, helping Intel and Microsoft become two of the most profitable companies in the world.

For nearly a decade, executives have debated dropping out of the personal computer business. Samuel J. Palmisano, who became I.B.M.'s chief executive in 2002, finally made the move. He decided that the company's management and investment resources would be better used in its other businesses like software and services to help customers use information technology to help automate business tasks from product design to procurement.

"The PC business is just not that important anymore to I.B.M. stra-

tegitally,” said A. M. Sacconaghi, an analyst at Sanford C. Bernstein & Company. “Palmisano has decided to focus instead on businesses that are more profitable for I.B.M. and promise higher growth.”

In a statement, Mr. Palmisano said the PC industry “continues to take on the characteristics of the home and consumer electronics industry which favors enormous economies of scale and a focus on individual users and buyers,” while I.B.M. will focus more on the corporate market.

Still, industry analysts say, it is not clear that a business that was struggling under I.B.M. will thrive under Lenovo. Worldwide growth in PC sales, according to Gartner, a research firm, will slow to about 2 percent a year from 2006 to 2008, less than half the projected revenue gains of 4.7 percent a year from 2003 to 2005. The number of PC makers, analysts say, will probably be winnowed in the next few years.

“Lenovo aspires to become a major international player and a recognized brand, a company with the ability to sell into multinational corporations and be profitable,” said Leslie Fiering, an analyst for Gartner. “This deal improves its chances, but the business is only going to get tougher over the next few years.”

The personal computer industry, like most technology businesses, is not one in which low labor costs — one of China’s advantages in competing with Western rivals — are much of an edge. The big winner in the business, Dell Computer, is mainly a master of ultra-efficient management of its suppliers, assembly and distribution.

I.B.M.’s rivals said the Lenovo purchase would create uncertainty among customers and provide opportunity for them. “It’s hard to think back on a successful large merger in the computer industry, and I don’t see this one being different,” Michael S. Dell, chairman of Dell Computer, said yesterday. “We like to acquire our competitors one customer at a time.”

Business Day

The New York Times

MONDAY, DECEMBER 13, 2004

I.B.M. Sought a China Partnership, Not Just a Sale

By STEVE LOHR

In July 2003, Samuel J. Palmisano, the chief executive of I.B.M., traveled to Beijing to explore the sale of the company's personal computer business. But he did not start by making the usual visit with executives of I.B.M.'s preferred partner, **Lenovo**, China's largest personal computer maker.

Instead, Mr. Palmisano first engaged in a bit of old-fashioned courtship. Before formally approaching Lenovo, he sought permission from the parents, by meeting privately with a senior Chinese government official in charge of economic and technology policy.

I.B.M. was not merely looking to sell its PC business, Mr. Palmisano told the official, but had bigger aspirations of creating a global enterprise, with I.B.M. contributing technology, management, marketing and distribution.

The idea, Mr. Palmisano explained, would be to build a modern and truly international Chinese-owned corporation. The move, he added, would demonstrate China's desire to take that next step toward economic maturity by investing abroad instead of merely serving as a manufacturing hub for the rest of the world.

The senior Chinese government official, Mr. Palmisano recalled, responded, "That is the future model for where we see China headed."

Permission was granted.

Inside I.B.M., the issue of whether to stay in the personal computer business has been debated for a decade. But the road to the Lenovo deal, according to I.B.M. execu-



Taiwan Semiconductor Manufacturing

For Taiwan, Another Threat

Taiwan, which prides itself on being the "silicon island" of East Asia, was caught off guard by the Lenovo deal. Page C7.

tives, began in 2000, shortly after Mr. Palmisano became the company's president and chief operating officer. He ordered an extensive review of the PC business and decided to stop selling I.B.M. PC's through retail stores.

At about that time, I.B.M. approached Lenovo for the first time, according to a person close to Lenovo, seeking to sell its PC business for \$3 billion to \$4 billion. At the time, I.B.M. had let its investment bankers know that if an attractive offer came up for the PC business, it would certainly consider a sale. But I.B.M. executives say that any discussion in 2000 was probably a prospecting overture by an outside adviser representing the company.

In May 2002, Mr. Palmisano directed

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John Joyce, then I.B.M.'s chief financial officer, to meet with Lenovo's senior management to sound out the company's interest in establishing a business relationship. Lenovo, according to I.B.M. executives, was clearly intrigued and had long been exploring ways to increase its international presence.

More than a year later, at the meeting in Beijing, the government official told Mr. Palmisano that a few years earlier the Chinese authorities would have been involved in such talks. But times had changed, the official said, and Lenovo and I.B.M. could negotiate by themselves.

By October 2003, I.B.M. resumed discussions with Lenovo. In March 2004, Mr. Palmisano went to Beijing to meet with Lenovo's founder, Liu Chuanzhi, as well as the president, Yang Yuanqing, and the chief financial officer, Mary Ma. That was when Mr. Palmisano described the full dimensions of what he had in mind. "I put it all on the table," he said.

Lenovo was definitely interested, though any such deal would be complicated. Many of the essential elements of the deal were hammered out over eight days in June, in a hotel near Raleigh, N.C., where I.B.M.'s PC business is based. The principal negotiators included Mr. Joyce, who now heads I.B.M.'s services business, Stephen M. Ward Jr., an I.B.M. executive who will become chief executive of the Lenovo PC business, and Mr. Yang.

There were other interested bidders, including one from an American buyout firm whose offer remained on the table until the end. And the Lenovo deal could have fall-

en apart. But apparently the Chinese option was the only one seriously pursued by I.B.M.

"There were simpler transactions we could have done," Mr. Palmisano said, adding, "What we wanted was not a divestiture, but this strategic relationship with Lenovo and China."

The sale of I.B.M.'s personal computer business to Lenovo for \$1.75 billion, announced last Tuesday, is "a three-dimensional deal," according to Mr. Palmisano. The sale provides I.B.M. with a path to leave a business that is large but not profitable. It is also the latest step in I.B.M.'s shift toward services, software and specialized hardware technology from mainframes to microprocessors for computer game consoles, all of which promise higher profits than the fiercely competitive PC business.

Yet the most intriguing, and potentially most important, dimension of the deal for the company is that it is I.B.M.'s China card. The new Lenovo, folding in the I.B.M. personal computer business, will be China's fifth-largest company, with \$12.5 billion in sales in 2003, and the Chinese government will remain a big shareholder. I.B.M. stands eager and ready to help China with its industrial policy of moving up the economic ladder by building the high-technology engine rooms to power modern corporations and government institutions, with I.B.M. services and software.

The deal is not expected to face any regulatory hurdles. Although there is a requirement, dating back to the era of the cold war, for review of possible national security implications, officials in Washington told I.B.M. executives in advance of the announcement that clearing it would not be a problem.

The pact could give I.B.M. "an extremely important leg up in China,"

Laura Conigliaro, an analyst with Goldman, Sachs, whose investment banking arm advised Lenovo, wrote in a report last week. "Ultimately, this is the single most valuable benefit to I.B.M. from this transaction."

The payoff for I.B.M., if any, will come gradually. The Lenovo deal, in which I.B.M. will take an 18.9 percent stake in the Chinese company, is a sign of I.B.M.'s commitment to China. I.B.M. is placing 10,000 of its employees, its brand for five years and some its prestige in Lenovo's hands. There is a lot more at stake than the \$1.25 billion in cash and stock Lenovo is paying, and \$500 million in debt obligations it will assume.

In China, I.B.M. is using a variation of the globalization formula that has worked well for it in Japan, Europe and elsewhere. I.B.M. patiently nurtures close ties with the government and becomes a premier employer and a stellar corporate citizen — so much so that it is eventually regarded more like a local company than an outsider.

"We don't have any special deal with the Chinese government or any other government really," Mr. Palmisano explained last week at I.B.M. headquarters. "It's a much more subtle, more sophisticated approach. It is that if you become ingrained in their agenda and become truly local and help them advance, then your opportunities are enlarged.

"You become part of their strategy," he added.

I.B.M. is no newcomer to China. It set up a business there 20 years ago, and there are now 4,200 I.B.M. employees in China. In 1995, the company opened a research laboratory, which now employs 150 Chinese scientists. Five years ago, I.B.M. established a Chinese software development lab, which today has 500 engineers working on Linux projects alone. (I.B.M. is the leading corporate supporter of Linux, a free operating system that is an alternative to Microsoft Windows.)

With the Lenovo deal, I.B.M. is forging closer links with China. While there were other offers for its PC business, Mr. Palmisano pushed for this deal — more a bridge to another economy than a simple sell-off.

Mr. Palmisano, 53, who became chief executive in 2002, is the leader of a generation of executives groomed to run a corporation that is based in the United States but gets the majority of its revenue abroad, as I.B.M. does today. Traveling extensively is part of the regimen, but so are stints of living abroad.

Mr. Palmisano managed I.B.M.'s large business in Japan in the early 1990's. He traveled extensively in



China Photos/Getty Images

Lenovo's chairman, Liu Chuanzhi, left, and John Joyce, the head of IBM Global Services, exchanging congratulations in Beijing last week.

David Barboza contributed reporting from Beijing for this article.

Asia, including China, and he continues to do so as chief executive. He makes three or four trips a year to China on business, and last summer he traveled there with his four children. "It was so they could get a feel for the Chinese culture and what's going on there," he said. "China is going to be such a huge influence in the world in their lives."

I.B.M.'s departure from the personal computer industry, Mr. Palmisano insisted, does not mean that the PC business is a bad one. But it does signal that it is no longer crucial to I.B.M.'s strategy of emphasizing services, software and server computers for corporate customers.

In an e-mail message to employees last week, Mr. Palmisano explained how the company's strategy and the PC business had parted ways. Today, there are two ways to create long-term value for customers and shareholders in the information technology industry, he wrote: "Invest heavily in R. & D. and be the high-value innovation provider for enterprises, or differentiate by leveraging vast economies of scale, high volumes and price."

I.B.M. is clearly choosing the first path, and has made a judgment that the PC business is inevitably on the second path.



K. M. Cannon/Bloomberg News

Samuel J. Palmisano, above, pursued a sort of personal diplomacy with Chinese officials on I.B.M.'s behalf. Right, Stephen M. Ward Jr., an I.B.M. executive who will lead the Lenovo PC business, with Fran O'Sullivan, general manager of I.B.M.'s personal systems group.



Bruce R. Feeley for The New York Times

Business Day

The New York Times

MONDAY, DECEMBER 13, 2004

Taiwan Watches Its Economy Slip to China

By KEITH BRADSHER

TAIPEI, Taiwan, Dec. 12 — When the **Lenovo Group** Ltd. of China agreed last week to buy **I.B.M.**'s personal computer division in exchange for cash and a large block of Lenovo stock, it was an even greater shock for people in Taiwan than those in the United States.

Taiwan prides itself on being the "silicon island" of East Asia; after all, the place has nurtured some of the world's largest manufacturers of computer chips, laptop computers and notebook computers. But businesses in Taiwan have been slow to establish brands known to retail customers. And now, with I.B.M.'s powerful PC brand slipping into the mainland's hands, those companies may soon find it even harder to trump their mainland counterparts and move beyond their role as low-cost producers.

"You look at China, how fast it's moving, it's incredible," said Frank Huang, chairman of the Powerchip Semiconductor Corporation, Taiwan's third-largest computer chip maker. "Nobody knows if it will work for Lenovo, but at least they have the guts to try."

A big advantage that Lenovo and other Chinese companies have over companies in Taiwan these days is that many corporations and investors want their stock: China has become one of the hottest investment plays in the world, despite the poor performance in recent years of Chinese stock markets and poor corporate governance at many Chinese companies, as shown most recently by the loss of \$550 million in derivatives transactions by the China Aviation Oil (Singapore) Corporation.

But voters in Taiwan may have raised the appeal of their island as a place to do business. In legislative elections on Saturday, they unexpectedly preserved the thin majority of lawmakers opposed to repeated moves by President Chen Shui-bian to increase Taiwan's political inde-

pendence from mainland China — steps that Beijing has labeled as provocative and has said could possibly lead to war.

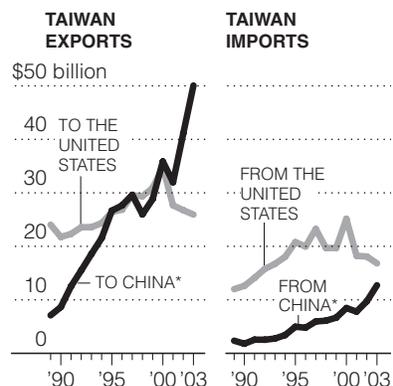
The most ardently pro-Beijing and anti-Beijing political parties fared worst of all, as voters tended to support more moderate candidates and parties on both sides of the independence issue — those who had taken more pragmatic positions in favor of preserving the status quo with Beijing, and in some cases had taken an interest in the economy instead of concentrating solely on ideological differences.

Voters “are in favor of a conciliatory, stabilizing approach by both sides so that both sides can create a better, more competitive economy for Taiwan,” said Andrew Yang, the secretary general of the Chinese Council of Advanced Policy Studies, a nonprofit research group here. “That truly will encourage more investment.”

Over the years, as many politicians here focused on the emergence of an identity for Taiwan distinct

Trade Migration

Once dependent on the United States, Taiwan now exports twice as much to China as it does to America.



*Includes Hong Kong and Macao.

Source: Taiwan Directorate General of Customs

The New York Times

from that of China, the economy became ever more closely intertwined with that of the mainland.

After decades of relying mainly on the American market to lift its 23 million people out of poverty, Taiwan now finds itself exporting twice as much to China as to the United States. Foreign direct investment in Taiwan has dropped by more than half in the last five years; the figure is now less than a fifteenth of the tidal wave of money pouring into new factories, office buildings, shopping

malls and other projects in China. Overseas money managers do invest substantial sums in Taiwan's stock

A troubling brain drain and widening income disparities.

market, however, partly to match its weighting in global stock market averages.

Close to a million people from Taiwan have moved to the mainland, most of them highly skilled managers and workers from ages 30 to 50, in a brain drain so great that both multinational companies and those based in Taiwan struggle to find qualified employees here.

“We now are faced with a shortage of skilled labor — in the past, we were known for an endless supply of skilled labor,” said Hu Sheng-cheng, the chairman of Taiwan's powerful Council for Economic Planning and Development.

Economic dependence on the mainland may someday limit Taiwan's political options, but it has also produced considerable gains lately. Powered by exports, Taiwan's economy has been growing briskly for more than two years, interrupted only by a short, sharp drop in the spring of last year because of an outbreak of severe acute respiratory syndrome, or SARS. Unemployment has fallen steadily for the last two years, to 4.3 percent in October.

To keep that expansion going, business leaders here say they will need better trade and transportation links with the mainland. The ruling Democratic Progressive Party says that it can negotiate direct flights and direct cargo shipments.

Yet while candidates for the legislature have been mostly silent on economic issues, senior policy makers in the administration of President Chen have been quietly removing some trade barriers. They have been doing this partly to comply with Taiwan's admission to the World Trade Organization three years ago and partly to attract foreign investors who want to maintain business networks spanning all of Asia.

Taiwan passed a new and more stringent copyright law this summer, delighting foreign recording and publishing companies, and it is close to adopting a law protecting pharmaceutical trade secrets — legislation sought by Merck and other pharmaceutical companies. Taiwan's police have been cracking down on counterfeits; they have

helped Gillette, for example, control an inflow of counterfeit Duracell batteries from the mainland.

While computer and semiconductor companies have moved many manufacturing operations to the mainland and have set up substantial research labs there, cutting-edge research still tends to be done here and in the United States, said Betty Lin, the Taiwan research manager for IDC, a big information technology consulting company.

Domestic companies, multinationals and the rest of the business community here have been united in demanding closer business links to China and an end to lingering protectionism toward many goods from the mainland. Working through the American Chamber of Commerce here, General Motors has been lobbying for an end to Taiwan's restrictions on imported Chinese auto parts, and Mars has sought to bring in mainland chocolate.

Taiwan currently has import limits on mainland goods in 15 percent of the categories of industrial goods and 35 percent of the food and agricultural categories. But it is reviewing these restrictions and gradually removing some of them, said Huang Chih-peng, Taiwan's director general of foreign trade.

As factories have moved to the mainland and been replaced by hospitals, banks, insurers and other service industries, income inequality has risen in what had been one of Asia's most egalitarian societies after the land reform that followed World War II. The ratio of average incomes in the top 20 percent of the income distribution to the bottom 20 percent has climbed to 6.07 to 1 this year, after hovering at 3 to 1 or 4 to 1 for many years.

Retirees and people with limited skills in an increasingly high-technology economy have been hurt the most, despite the recent economic gains. “In the past five years,” said Wu Chong-shia, a 74-year-old retired engineer, “Taiwan's economy has been going downhill.”



Taiwan Semiconductor Manufacturing Company

A worker inspects a silicon wafer at a factory in Taiwan. Plants like this have been moving to the mainland.

Business Day

The New York Times

SATURDAY, DECEMBER 25, 2004

Outsourcing to the U.S.

Chinese Buyer of PC Unit Is Moving to I.B.M.'s Hometown



Reuters

A customer in Shanghai checks the price of a Lenovo computer. Lenovo has purchased the personal computer unit of I.B.M.

By DAVID BARBOZA

BEIJING — Inside the shimmering headquarters of the Lenovo Group, China's largest computer maker, workers are carting birthday cakes over to three office cubicles.

These days, every employee here gets a birthday gift, something a multinational company might be expected to do in this age of feel-good corporate management.

The problem is that people in China do not traditionally celebrate birthdays.

But that is changing. And so is Lenovo. It is trying to become a global company with its purchase of I.B.M.'s personal computer business for \$1.75 billion, and handing out birthday cakes is just part of the process of evolving into a multinational corporation.

To further globalize the company, however, Lenovo will do something even bolder: it will move its headquarters to Armonk, N.Y., where I.B.M. is based, and essentially hand over management of what will become the world's third-largest computer maker, after Dell and Hewlett-Packard, to a group of senior I.B.M. executives.

American multinational companies outsource manufacturing to China. Why can't a Chinese company outsource management to the United States?

Executives at Lenovo — which gets about 98 percent of its \$3 billion in revenue from China — are, in effect, acknowledging that they do not have the necessary global experience to run the new company.

"The most valuable asset we have acquired through I.B.M.'s PC business is its world-class management team and their extensive international experience," says Liu Chuanzhi, chairman of Lenovo and one of the company's founders.

Indeed, few executives at Lenovo seem disappointed by the move. In fact, many seem pleased to be buying into a blue-chip American corporation.

After all, Lenovo — formerly known as Legend — may be the biggest computer maker in China, but the company is still virtually unknown outside of Asia.

And top executives at Lenovo say they are eager to learn how to run a global company from their new colleagues at the PC unit of

Continued on Page 2

I.B.M., which operates in more than 150 countries and had \$9 billion in revenue in 2003.

Preparations are already under way in Beijing. For the last few months, all vice presidents have been required to study English for at least one hour a day. The chairman says he has read books about Bill Gates and Andrew Grove. And the chief executive of Lenovo has agreed to give up day-to-day management of the company to assume the role of chairman.

His task will be to fly back and forth from Beijing to New York to consult with Lenovo's newly named chief executive, Stephen M. Ward Jr., the senior vice president and general manager of I.B.M.'s Personal Systems Group.

Many analysts were surprised by

A new work agenda: studying English and handing out birthday cakes.

Lenovo's decision to outsource its management to New York.

"I admire what Lenovo is doing," said Joe Zhang, a UBS analyst who follows Lenovo. "Many Lenovo executives have decided to do this at the expense of their careers. They're putting personal ego behind for the greater good of the company."

People involved in the negotiations with I.B.M. said that Lenovo officials saw no other choice. They recognized that Lenovo could not simply take over a much bigger I.B.M. PC unit and run it from Beijing.

That is why a major theme of the talks was how to keep business as usual after the deal was completed, those people say.

While I.B.M. is full of M.B.A.'s, Lenovo — which is still partly government owned — has only two members of the senior management team with an M.B.A. And none of the top executives have ever worked for a multinational corporation.

But analysts also say that Lenovo is no pushover. The company is considered one of China's most successful corporations. For years, for example, Lenovo's brand has outsold Dell, Hewlett-Packard and I.B.M. computers in China.

And even though it began as a state-owned enterprise, Lenovo has always been entrepreneurial, analysts say. It was one of the first com-

panies here to list its shares in Hong Kong. It was among the first to reward its employees with stock options, which have turned some of its top executives into millionaires.

The company's identity was shaped, in part, by its visionary chairman, Mr. Liu, who in 1984 helped found Lenovo with a group of scientists from the Chinese Academy of Sciences.

Early on, it was the hard-charging Mr. Liu who persuaded the Chinese government to give the company greater control over its hiring and salary decisions, allowing the state-owned company to raise capital from outside investors and essentially operate like a private company.

Later, Mr. Liu won government approval to list the company's stock in Hong Kong and for Lenovo to start producing its own computers, rather than simply marketing Western brands.

By 1997, with its own brand of low-cost Chinese-character-friendly computers, Lenovo was suddenly China's biggest computer maker.

Mr. Liu, a military academy graduate who suffered through China's brutal Cultural Revolution, said he often ran the company with an iron fist, scolding workers who showed up late for meetings and pushing scientists and executives to deliver on their promises.

"All the people were scientists in those days," Mr. Liu recalled. "They were very casual. They'd always be late for meetings and they'd make their promises. So we decided that if anyone was late they'd stand up for one minute."

Along the way, Mr. Liu also groomed a cadre of loyal and fierce executives, including Yang Yuanqing, 42, who is now the company's chief executive, and Mary Ma, 52, Lenovo's highly respected chief financial officer.

But just how the new company's management will take shape in Beijing and New York is still unclear.

Though he will step down after the merger, Mr. Liu, 60, will continue to serve as a member of the board.

Mr. Yang, a serious-minded executive who helped fire up the company's sales force, will become chairman. Ms. Ma, who led the talks to acquire I.B.M.'s PC unit, is expected to remain as chief financial officer.

Lenovo's challenge will be to meld radically different corporate cultures.

"Neither culture should be the de facto culture," said Martin Gilliland, an analyst at Gartner Research. "They have to start a new one. Can they develop a new Lenovo business culture? That's one of the keys to success."

In recent years, Lenovo officials say the company's corporate culture

has evolved from what some company officials called the "semimilitary" culture that prevailed in the early days, to a more easy-going and hip high-tech culture.

These days, Lenovo's new corporate headquarters in Beijing's "Silicon Suburb" is teaming with young 20- and 30-somethings, casually dressed, chattering into mobile phones and looking confident.

The halls are decked with employee recognition plaques, business school theorems and New Age philosophy: "Happiness," reads one workplace poster. "Work hard and live art," reads another.

Newcomers to Lenovo are even trained in the same kind of teamwork programs that can be found at American business schools, right down to the leaps of faith — the backward falling employee who is caught by a team of supportive co-workers.

And for those who need a jolt, each morning at 8:30 the Lenovo theme song is broadcast on loudspeakers throughout the headquarters, urging workers to guide the corporate ship through perilous waters.

"Lenovo, Lenovo, Lenovo," one line goes, "we are sailing through the waves to lands far away. Lenovo, Lenovo, Lenovo. We are building a new splendor."

Lenovo is also seeking the best outside advice it can get, hiring a client roster that includes Goldman, Sachs; McKinsey & Company, the consulting firm; Weil, Gotshal & Manges, the New York law firm; and Ogilvy, the public relations firm.

And the new language for the company is English, company officials say.

Lenovo officials say they are studying American business history, and the chief executive lists The Harvard Business Review as part of his regular reading.

In fact, like other computer and software giants, Lenovo is even fanning its own myths. In 1984, the company was formed in a small, concrete security guard's booth that became its first laboratory and headquarters.

The booth — part of the Chinese Academy of Sciences — was torn down in 2001 to make way for a new building. But it was soon rebuilt and now sits like an empty artifact alongside the headquarters of Lenovo's parent company, **Legend Holdings**.

Critics now worry that Lenovo must find a way to preserve I.B.M.'s traditions in a PC industry of increasing competition and commodity manufacturing.

But Mr. Yang, Lenovo's current chief executive, says not to worry.

"We are going to stick to the principles of I.B.M. as a high-premium, high-value image," he said. "We're not going to make any compromises on this."



Miranda Mimi Kuo for The New York Times

Liu Chuanzhi, chairman of Lenovo and one of its founders, said that acquiring the international business skills of I.B.M. managers was one of the big attractions of the deal for the personal computer division.