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& GAMBLE**
WHAT'S BEHIND ITS NEW STRATEGY
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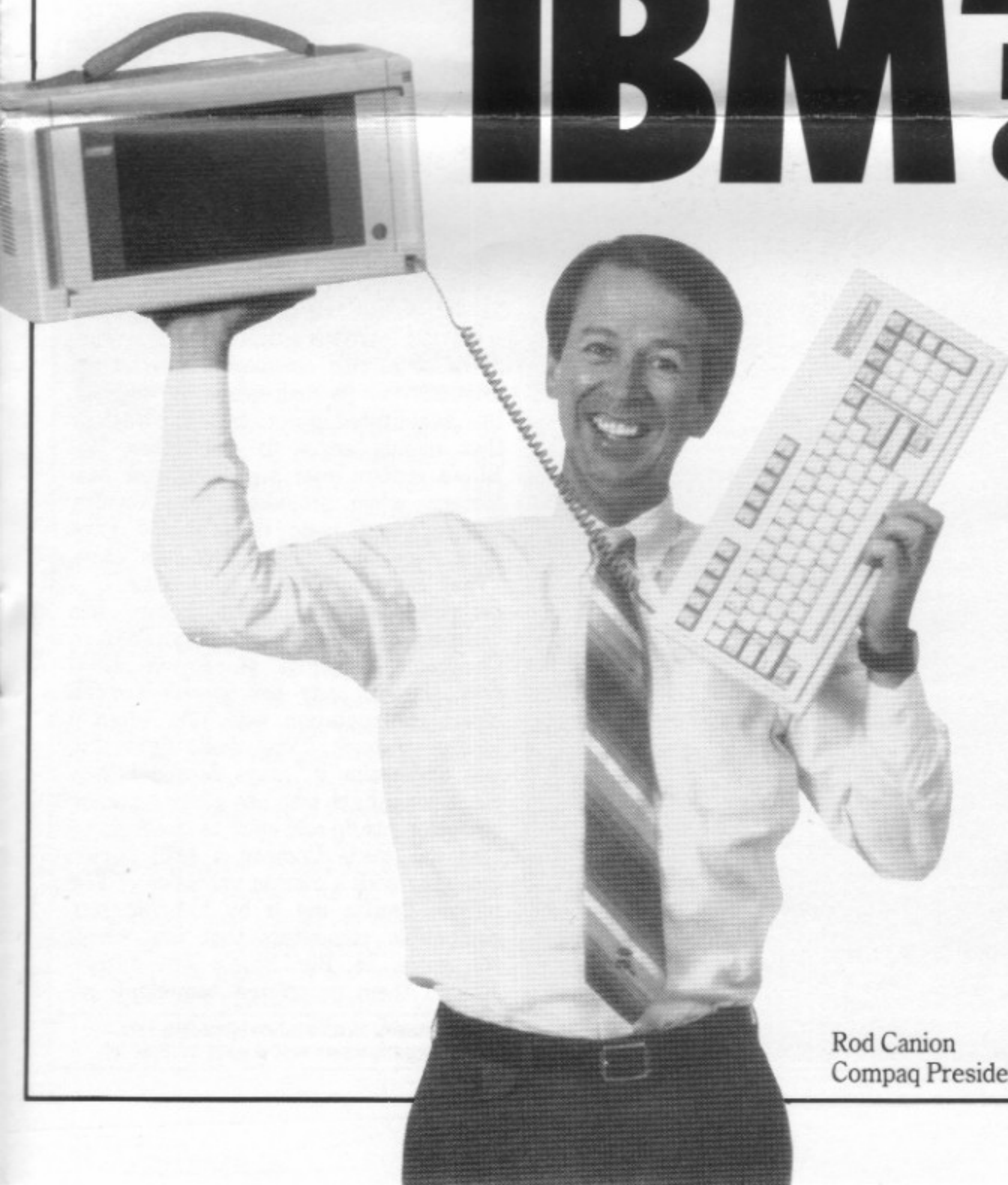
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WHO'S AFRAID OF IBM?



Not Compaq Computer. It's challenging Big Blue's new PC line. So far, so good. But IBM is not your ordinary Goliath.

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Rod Canion
Compaq President and CEO

WHO'S AFRAID OF IBM?

NOT COMPAQ. THE FEISTY NO. 2 IN OFFICE PCs IS PICKING A FIGHT

On a morning in mid-May, 1,200 employees of Compaq Computer Corp. assembled at a modern Baptist church in northwest Houston. At the pulpit was Joseph R. "Rod" Canion, the president who for five years has led Compaq on an unerring path from obscure startup to International Business Machines Corp.'s No. 1 rival in office personal computers. Diligence, patience, teamwork, and humility—those had always been Canion's watchwords. This day, however, Canion was preaching the gospel of a bolder Compaq. He told his flock that they, not IBM, now lead the industry. "IBM is running behind and not catching up," he declared.

Canion, 42, a former Texas Instruments Inc. engineer who had to take public speaking lessons when he became Compaq's leader, is preaching the same sermon to customers, dealers, and investors: With IBM's introduction of its Personal System/2 computers on Apr. 2, he says, the No. 1 computer maker deviated from the hardware and software standards that had developed around its original PCs. In their place, he argues, IBM substituted proprietary innovations that mainly serve to strengthen Big Blue's control over microcomputer customers—while providing few benefits. "Some people said they should have done it on April Fool's Day," he jokes. "They came as close as they could."

ON THE DEFENSIVE. Such rhetoric has "surprised a lot of people," says Compaq Chairman Benjamin M. Rosen. Until now, the company has largely avoided direct confrontation with IBM, often a losing strategy. "You don't fight IBM, you undermine it," says Seymour Mer-rin, a consultant who has advised Canion to button his lip and stick to the formula that has made Compaq a \$625 million company with a market valuation of \$1.6 billion. Canion did it by building IBM-compatible computers that cost about the same as Big Blue's but outperformed them or offered something ex-

ROD CANION, EVANGELIST: HURLING FIRE AND BRIMSTONE AT IBM'S NEW STANDARD

Performance Advantage

20% Faster Processor

Winchester Disk Access 2.5

Times Faster

Significantly More Expandable

Greater Display Flexibility

True Compatibility with Industry Standard

Competitively Priced

tra. The paradigm is Compaq's first computer, the suitcase-sized portable model that inspired the company's name. It was a hit because IBM didn't have a comparable product.

So why change the formula now? Partly because IBM has put Canon on the defensive. In its efforts to sell PS/2 models, IBM is implying that in the future only they will perform such tasks as sharing complex software with IBM mainframes across companywide networks. If IBM persuades customers of this, it will hurt Compaq's following in

IBM PCs are in short supply because IBM has curtailed shipments of them in hopes of converting customers quickly to PS/2.

In Canon's view, that means the time is ripe to attack. In a recent International Data Corp. survey, 52% of corporate computer buyers indicated that the introduction of the PS/2 may cause them to delay major purchasing decisions in the next six months. That leaves 48% that won't wait. Canon figures that customers have sunk \$80 billion into IBM PCs, PC clones, and the hardware options and software that work with them. He's bet-

In April the company chalked up its largest backlog of orders ever for its desktop models, the computers that compete directly with IBM's PC/AT. Analysts say that the backlog grew again in May. Demand for Compaq's newest portable, the Portable III, is so strong, the company says, that it will be unable to fill all the orders until fall.

"Is Compaq just a winner or a huge winner?" asks Michele Preston, an analyst at Salomon Brothers. She recently upped her estimate of 1987 earnings by 10%, to \$98 million, or \$2.50 per share on



THE PORTABLE III PLANT: "THE STRATEGY IS TO SLAM [IBM'S] PS/2 NOW BECAUSE COMPAQ DOESN'T HAVE ONE TO SELL," SAYS AN ANALYST

large companies, whose purchases accounted for 45% of Compaq's sales last year. "Canon has to be vocal now," says David Carnevale, a vice-president at market researcher InfoCorp. "The worst thing that could happen is that people become confused and stop buying."

But Canon's aggressiveness also is aimed at cashing in on a golden opportunity. There are some 10 million IBM PCs and compatibles in businesses around the world. Getting their owners to trade up to the PS/2 line may not be easy—even given IBM's marketing clout. The PS/2 computers use a different kind of floppy disk from the PC's, making it difficult to transfer programs and files to the new machines. The new IBM machines can't use the add-in circuit cards designed for existing PCs. And although the new IBM machines are more powerful than their predecessors, the software that will let them use that power won't exist for another year. In the meantime,

ting that even IBM can't redirect that movement—at least not quickly. "IBM has a less dominant role in this market" than in mainframes, notes Rosen. "Customers have more choice."

MARKING TIME. If Canon can make fresh inroads as buyers ponder PS/2, he's likely to boost his market share again this year (chart, page 70). "The strategy is to slam the PS/2 now because Compaq doesn't have one to sell," says George Colony, president of Forrester Research. "Meanwhile, they are madly cloning PS/2 in their labs." Canon insists the company has no plans to clone the PS/2 unless it becomes a widely accepted standard. But the minute the tide turns toward PS/2, analysts think Canon will follow.

So far this strategy looks like the right one. In the first quarter of 1987, despite the specter of the PS/2 introduction, earnings soared 142%, to \$20.2 million, as sales rose 46%, to \$210.9 million.

sales of \$931 million. In 1986 Compaq earned \$43 million on \$625 million in sales. Estimates for 1988 earnings run from \$3 to \$3.50 a share, with analysts expecting revenues to reach \$1.2 billion.

Even Wall Street, which for years worried that IBM would somehow hamstring the young company, is taking note. Though Chairman Rosen, the venture capitalist who first backed the company and a former Morgan Stanley & Co. analyst, listed Compaq's shares on the New York Stock Exchange to get better visibility, the stock languished in the teens until late 1986. It has since hit a record 50, buoyed by reports of a slow start for IBM's new models and intensifying demand for machines that are compatible with the older PC/AT line. The stock has also made the most active list lately.

Some of the market share that Compaq grabs now could be difficult to hold, warns Wertheim & Co. analyst Harvey

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C. Allison. Because IBM products have been in short supply, he argues, Compaq got an artificial boost. Compaq's results may even be flat in the September quarter, he says, because of the company's increasing dependence on European sales, which usually slow in the summer. Still, Allison agrees that Compaq's overall outlook is positive for the next two years.

Oddly for a young company, Compaq's greatest strength appears to be good management. From the beginning it has relied on a tightly knit group of seasoned industry veterans to give it management depth. Of Compaq's 21 officers, 17 are Texas Instruments alumni who had as much as 21 years of experience. "We didn't always know what to do," admits Senior Vice-President B. Kevin Ellington, 49, "but we knew what not to do." Despite the urgings of critics, Compaq resisted the temptation to branch out too far from microcomputers. It also maintained strong relations with dealers by not setting up its own sales force. Canion's philosophy is the company's byword: Stick with what you know—and do it better than anyone else.

Experienced management helped Compaq sidestep the pitfalls that eliminated most of its original competitors. Those companies fell victim to a variety of marketing, distribution, and financing problems when the PC boom began slow-



CHAIRMAN ROSEN: KEEPING COMPAQ'S PROFILE HIGH

ing in late 1984. With its tight controls, Compaq sailed through the 1985-86 computer slump—without the kind of earnings drop that Apple Computer Inc. took as a result of inventory write-downs and layoffs. And as inexpensive clones sliced IBM's share of the worldwide PC market from 52% to 32% last year, Compaq's share rose 15% to 7.5% (chart).

The key to Compaq's success seems to be the right blend of engineering and marketing savvy. It is the only major maker of IBM-compatible PCs that does all its own reverse engineering—the process of coming up with the electronic circuits and software that duplicate the functions of the IBM PC. "Their engineering is top-notch," says Jean-Claude Cornet, vice-president of Intel Corp.'s microcomputer group, the supplier of microchips for IBM and IBM-compatible personal computers. But the company also pays close attention to what the marketing folks say. "They haven't become so bureaucratic that they can't respond to customers," says Sherrie L. Burger, manager of office information systems at Blue Cross/Blue Shield in Chicago.

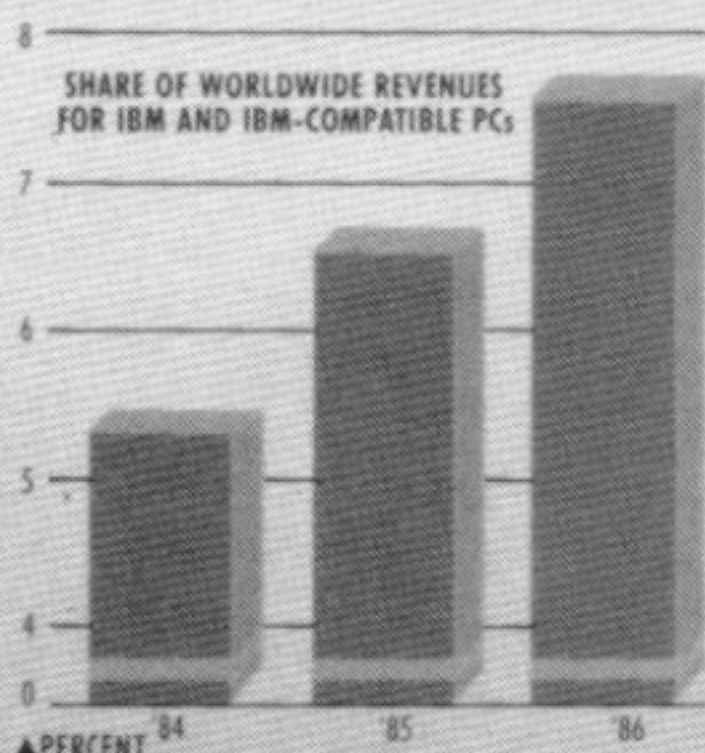
Maintaining that management style is the company's greatest worry as it passes the billion-dollar sales mark and extends its operations to new plants in Singapore and Scotland, says Ellington, who is in charge of corporate development. In

the coming year, the company will be entering new overseas markets in an attempt to boost sales outside the U.S. from 19% to about 45% of revenues. In addition, Compaq has a backlog of new products to launch, including a widely expected portable using the advanced Intel 80386 microchip. "We have more products than we can introduce," says Canion. Ellington's concern: "How can we continue to have good teamwork and fast response and become a very large company?"

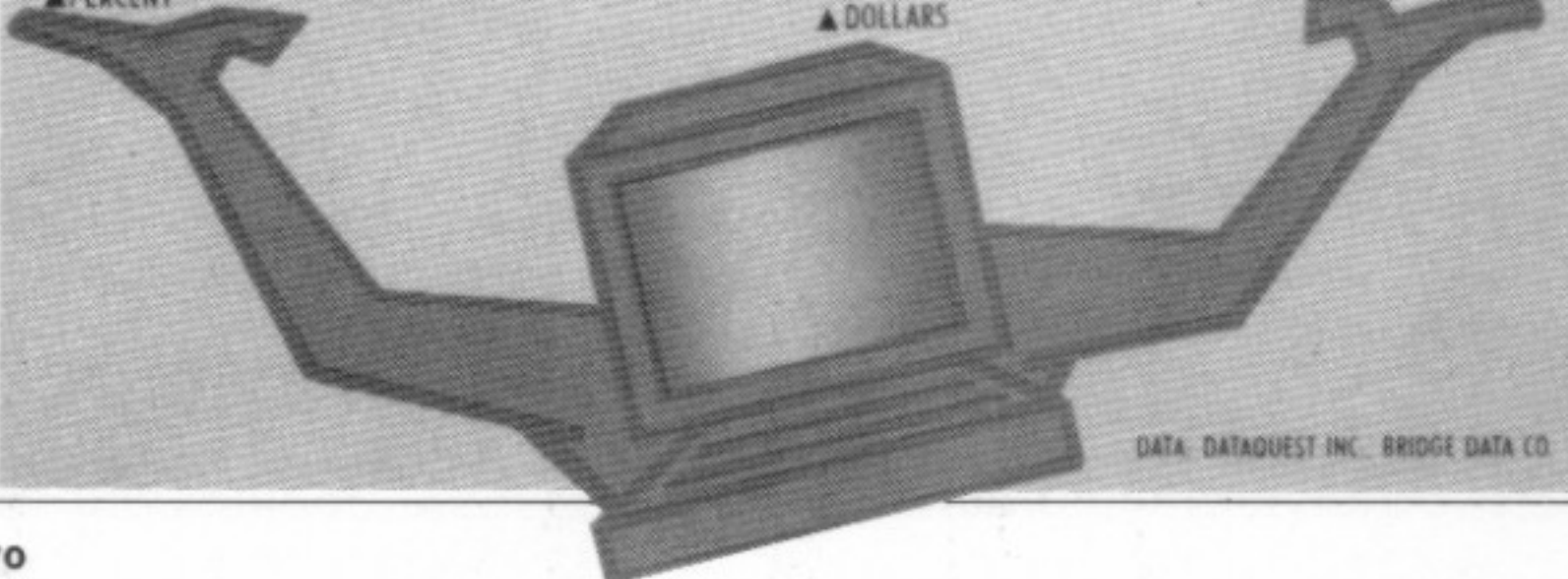
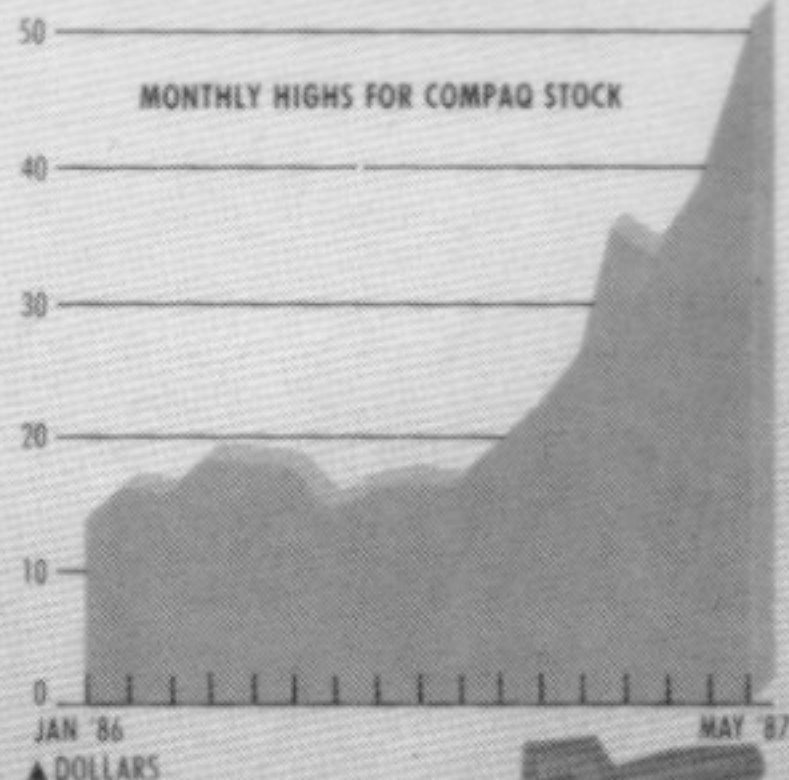
Canion might still be a nerdy engineer if he had found a topic for his PhD dissertation in electrical engineering. Frustrated, he left the University of Houston to try business. A lifelong Houstonian—the son of a Sears, Roebuck & Co. salesman and a schoolteacher—Canion joined TI in Houston, because "I liked its reputation and it was local." He climbed the ranks, becoming a business unit manager. Thomas Stringfellow, now a TI division manager, recalls him as a "very forward thinker" who was "soft-spoken but very effective."

'TOO EASY.' But after 13 years, Canion tired of TI's bureaucratic style and its emphasis on technical excellence at the expense of marketing. The turning point came in 1980. After he set up a disk-drive manufacturing unit, Canion was abruptly transferred to another business unit because management considered his job finished. "The job just begins when you start selling product," he contends. "You need to continue the marketing focus." The last straw was his assignment

COMPAQ'S STEADY MARKET INROADS...



...ARE WINNING WALL STREET'S RESPECT



DATA: DATAQUEST INC. BRIDGE DATA CO.

to the group designing TI's first office microcomputer. Canion quit within 18 months because he felt management misunderstood personal computers. His biggest gripe, ironic in light of Compaq's present market battle: "TI wouldn't accept the importance of IBM's products."

Canion and TI buddies William H. Murto and James M. Harris set up Compaq—and promptly got off to a slow start. Contrary to its early advertising, the company did not spring to life one afternoon when the founders sketched the idea for a portable PC on a napkin at a Houston pie shop. According to L. J. Sevin, Rosen's partner in Sevin Rosen Management, Canion called with a plan for building circuit cards to expand the storage capacity of IBM PCs. Sevin was underwhelmed. He felt that the product was "a little too easy to do. We made him go back to the drawing board."

Canion's fourth or fifth idea clicked. It was for an IBM-compatible portable. With \$1.5 million in seed money, Canion and his crew began designing Compaq's first PC in February, 1982. By early 1983, when Compaq began shipping its portables, the company had raised \$30 million. In late 1983 it raised \$66 million more in a public offering, then finished the year with sales of \$111 million.

By then, the experience the TI veterans had in running a big company had come into play. With scarcely enough sales to support the expenditure, Compaq had installed a Hewlett-Packard 3000 minicomputer system to manage inventories, finance, and forecasting. The company also instituted the type of formalized management reporting systems that many startups overlook.

GOOF-PROOF. But the last thing Canion wanted was another TI-style bureaucracy. Compaq's reporting lines are changed as needed. In early 1984, for example, when the original portable was still the only product, Canion felt the company had to develop more models in a hurry. He took three strong managers and gave each one a product area, complete with its own marketing, manufacturing, and engineering staff. Within a year "we went from one product to many," he says. Then the problem changed. How could the company introduce and build so many models when each product line was acting independently? Canion redrew the organization chart with four functional groups: marketing, engineering, sales, and manufacturing. By centralizing marketing, for instance, the company can make sure a new model does not prematurely kill off any of Compaq's current PCs.

Compaq managers boast that mistakes seldom get out the door. One perennial research project, a laptop computer dubbed "sleek and sexy" by insiders, has never advanced beyond the

A MACHINE THAT ONLY ITS MAKERS COULD LOVE

Compaq Computer Corp. may be batting 1,000 with its PC products, but it's hitting way below average in a related field: telecommunications. In 1984 it set up a subsidiary called Compaq Telecommunications Corp. to develop new products. Since then, the Dallas-based unit has soaked up investments of \$20 million. Now, limping along, it's a reminder that even Compaq's much-praised management can take its eye off the ball.

On the surface, the company's interest in telecommunications made sense. The January, 1984, breakup of American Telephone & Telegraph Co. was spurring innovations in communica-

anything more than what you could do separately," contends Kenneth G. Bosworth, president of International Resource Development Inc., a Norwalk (Conn.) market researcher. Electronic mail and automatic telephone dialing, Telecompaq's most vaunted features, could be accomplished just as easily with a \$500 terminal and an inexpensive speed dialer.

FEW CHAMPIONS. Compaq also failed to grasp the politics of corporate purchasing decisions. "Typically, telecommunications decision makers and computer decision makers don't get along terribly well," says Gary Hawthorne, director of business line management for

THE TELECOMPAQ: COSTLY AND HARD TO HOOK UP



tions systems. Many companies, including giant Northern Telecom Ltd., believed that products combining phones and personal computers would be the next wave. Rival International Business Machines Corp. had already bought Rolm Corp., a leader in PBX systems that was also building PC/telephone products.

LINE ENGAGED. Compaq President Rod Canion moved quickly. In March, 1985, Compaq Telecommunications introduced six models of the Telecompaq PC/telephone. Compaq immediately sewed up deals with several phone companies to retail the machines for a hefty \$4,194 to \$6,395.

Unfortunately, Compaq overlooked one of its prime business tenets: Understand your customers. The buyers it had in mind—middle-level managers—saw no reason to shell out twice the cost of a regular personal computer for a Telecompaq. The machine "doesn't do

data systems at PacTel InfoSystems, which sold the Telecompaq for about 18 months. The mixed-breed machine required input from both, and frequently neither would champion it.

Finally, Telecompaqs often were hard to hook up, say dealers, because of differences in phone systems. And until new software came along this year, a Telecompaq could send electronic mail only to another Telecompaq. Worse, the machine still uses an 8086 chip, much slower than the ones now used in the most popular PCs.

Although Compaq is still filling orders, Canion concedes that the product has been "a failure from a revenue standpoint." Still, there's one bright spot. Compaq Telecommunications is credited with developing the internal modem that enables Compaq's successful Portable III to communicate with other computers via phone lines.

By Jo Ellen Davis in Houston

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prototype stage because Canion feels the available technology requires too many compromises, such as crowded keyboards. In five years only one true flop has emerged: Telecompaq, a combination PC and telephone that was introduced in 1985 (box, page 71).

To make such errors rare, Canion says he has tried to create an egalitarian atmosphere that fosters teamwork and communication. There are no assigned parking spaces at Compaq's lush wooded campus, and all employees get stock options. In return, employees are fiercely loyal. Says Ross Cooley, vice-president of sales: "Another former IBMer told me that it's the solution to everything that

be smart and motivated, but above all easy to get along with. It is not unusual for a new hire to interview with 15 people who represent all departments of the company and a variety of seniority levels. Who is cut? Loners, plus anyone who wears his ego on his sleeve. "The No. 1 issue is whether they fit into the way we do our business," says Sales and Marketing Vice-President Michael S. Swavely, 33, a former marketing manager at Chrysler Corp. and the company's youngest top-level executive. "We can find lots of people who are competent."

Some former employees are critical of this homogeneous culture. "You need some wild ducks around," argues H. L.

nizations have winners and losers," observes Canion, "but not at Compaq."

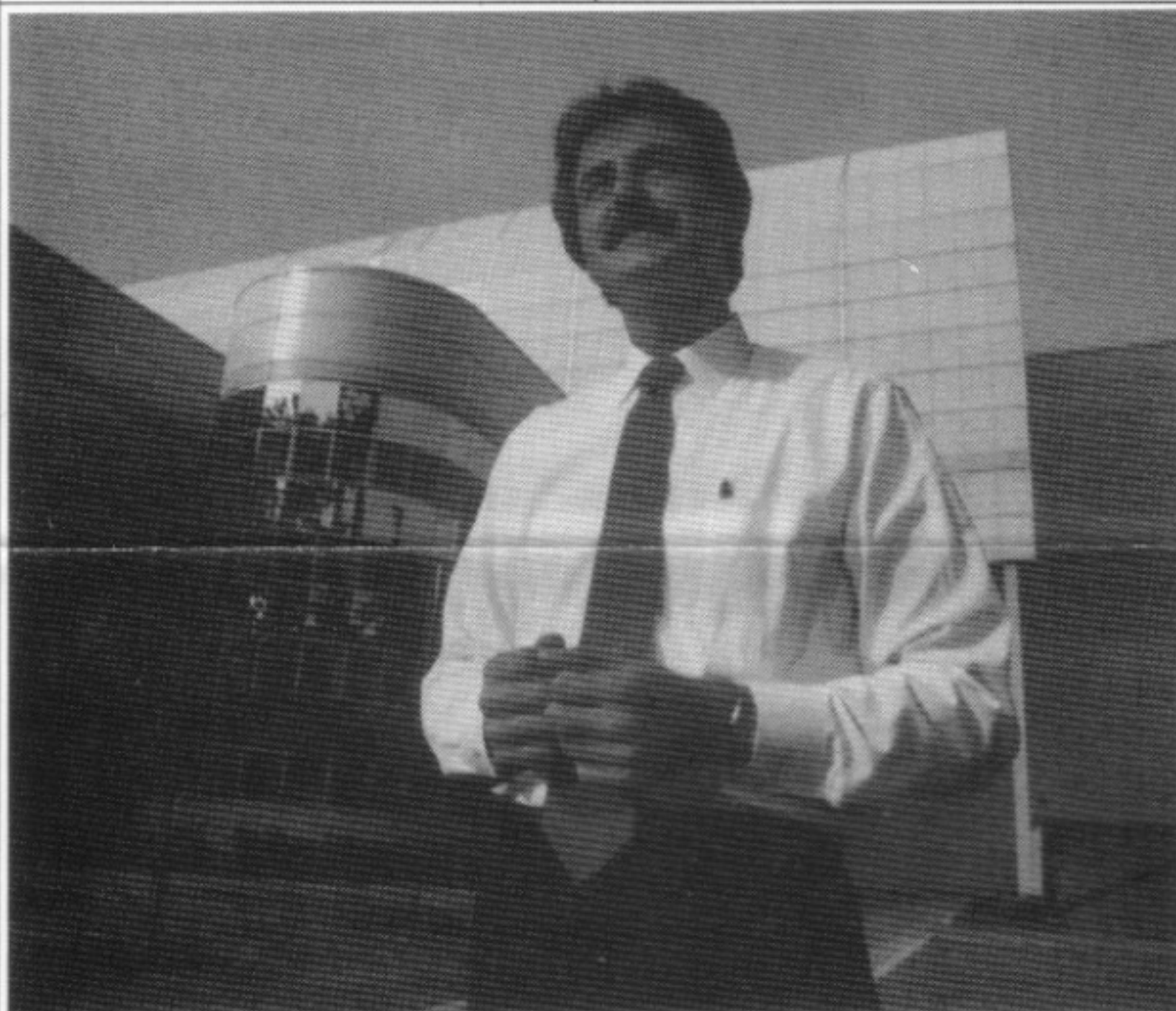
Top managers use the same process to fine-tune Compaq's strategy. And Compaq maintains close relationships with its customers, dealers, and suppliers, using them as a sounding board. "Some companies think they know the answers," says Jeffrey D. McKeever, president of MicroAge Inc., a 176-unit chain. "Compaq listens." McKeever suggested in 1984 that Compaq offer a built-in tape drive for duplicating the contents of a hard disk to protect against accidents. Compaq followed his advice, and the feature—not then available on IBM PCs—became a major selling point.

Compaq's meteoric rise has surprised even Canion, a down-to-earth type who passed up the big corner office designed for him in Compaq's headquarters. He claims he was always confident of Compaq's strategy but had no idea it would work so well. "My definition of success was nothing like what Compaq turned out to be," he says in his Texas drawl.

GADGET-HAPPY. Canion's personal gains have also exceeded his expectations. His compensation hit \$550,000 last year and his approximately 1% chunk of Compaq stock is worth about \$16 million. However, Canion has eschewed most of the trappings of wealth. Although an occasional drag racer in high school, he drives a Mitsubishi sports car rather than the flashier Porsches and Ferraris favored by other Compaq executives. He still flies coach, even cross-country. Though travel often keeps him away from Houston, Canion's one extravagance is a huge house facing a country club. He also loves to buy electronic toys—everything from laptop typewriters to cellular phones.

Lately he's been on the road more than ever, trying to keep Compaq's momentum going. And to do so, Compaq has started assuming the role of leader. That became clear last September when the company brought out the first IBM-compatible PC to use Intel's 80386, a microchip with more than twice the power of the chips then used in IBM's most powerful model. Prior to that, Compaq had always taken its cues from IBM, following the introduction of new IBM computers with its own versions within a year. Compaq's machine beat IBM's 80386-based models by nine months.

The new game plan worked better than expected. The company sold about 20,000 Deskpro 386s in the last quarter of 1986 and 25,000 in the first quarter of 1987, adding \$225 million in revenues. More important, Compaq established itself as the technology leader and as a result, expanded its presence in large corporations. "We couldn't wait for



SWAVELEY: A CHRYSLER ALUMNUS WHO WEARS COMPAQ'S BUTTON-DOWN CULTURE WELL

was frustrating at IBM, and he was right." Still, life at Compaq is demanding. In April, co-founder Bill Murto dropped out to pursue a Master's degree in religious studies.

Indeed, by Silicon Valley standards, the Compaq culture might appear confining. Wingtips and pinstripes are the norm, not Reeboks and Hawaiian shirts. California-style Friday beer bashes are out—alcohol is *verboden* on Compaq property. When a trade magazine sent champagne to celebrate Compaq's winning a product award, it was locked away, and it still is. Instead, Compaq gives its 2,000 headquarters employees all the free soft drinks they can consume—about a million cans last year.

Managers have a Compaq type in mind when they recruit. Applicants must

Sparks, former vice-president for sales and now president of Amdek Corp., a company that sells PC add-ons such as monitors. But wild ducks don't fit Compaq's consensus management style. Known simply as "the process," it involves informal team meetings where members discuss a problem or policy. Every department involved gives its view. Then the group attempts to separate fact from instinct, examines the trade-offs, and arrives at a decision. At a new-product meeting recently, representatives from Compaq's international group argued against the date the domestic division had chosen for a launch. And sales department staffers worried about the product's effect on dealer inventories. It is rare that a single member or group will dominate. "Most orga-

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IBM," says Fred Herpel, director of controller accounting systems at Primerica Inc., which has six Deskpro 386s.

The success of the Deskpro 386 may have helped give Canion the gumption to launch his campaign against the IBM PS/2. One of his big gripes is the PS/2's 3½-in. floppy disks. Although they hold more information and are sturdier than the current "industry standard" 5¼-in. floppies, Canion argues that "this advance in technology is not justified" because customers have a greater need for a standard disk that can be used to exchange programs and data. He derides the PS/2 by comparing it to New Coke, Coca-Cola Co.'s ill-fated effort to move the market en masse to a new product.

But computers aren't cola, and plenty of customers welcome the improvements in IBM's new machines, even if some of the benefits are still a year away. "If

Rod Canion would just shut up, he'd be much better off," says Matt Fitzsimmons, president of ComputerLand of White Plains, N.Y. "When he talks about sticking with the old floppy disk, nobody's even listening." Jeffrey L. Ehrlich, manager of product technology for General Electric Corporate Information Technology in Bridgeport, Conn., agrees. "PS/2 is the future, the new direction," he says. The new machines will work intimately with GE's mainframes in a way that Canion's "industry standard" PCs can't, he argues. By insisting that customers cling to standards that grew up around early 1980s technology, "Compaq is just posturing," Ehrlich says.

Compaq is likely to win the war of words, at least for awhile. It's using the confusion over PS/2 to strengthen its role, especially in companies that don't rely heavily on IBM mainframes. But as

IBM starts to deliver on its promises for PS/2, Canion will have to make some of his most crucial decisions yet.

Should he continue insisting that Compaq and other imitators of IBM PCs have established their own market? The risk there is that by lumping itself with what has become an army of clonemakers, Compaq might lose its distinctive position as a strong No. 2 to IBM. Indeed, Apple already is challenging Compaq for that role. The alternative may be to revert to Compaq's original strategy and simply match IBM move for move. Canion says he hasn't decided yet which path to take—and he won't until his customers tell him. "We're not arrogant or dumb," he says. "We're actively looking to see what the market wants." So far, he's shown a pretty good feel for that.

By Jo Ellen Davis in Houston, with Geoff Lewis in New York

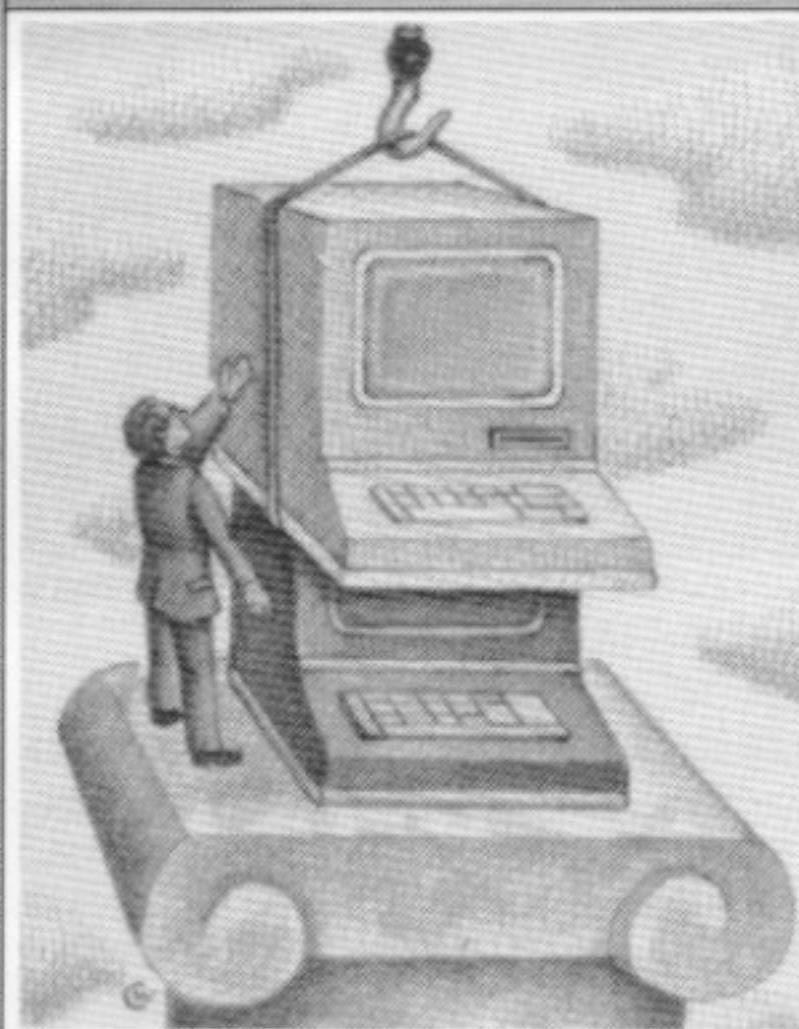
CAN IBM CONTINUE TO CALL THE TUNE?

There are two kinds of standards in the computer business: those that arise from concerted industry efforts and those that are established by the best-selling products from the most influential suppliers. The second type usually dominates, and there's no better example than the IBM PC. By last year, however, International Business Machines Corp. felt that things had gotten a bit out of hand: Copies of the PC were outselling the original by two to one. Even IBM's best customers were wondering why they should buy the IBM version.

BIG QUESTION. So IBM brought out the Personal System/2 line in April and is trying to set a new standard. With its 32% share of the PC market, IBM is likely to succeed—eventually. But for now, it is in the odd position of promoting a new standard to replace the one it set five years ago. That has a lot of experts asking the question that Compaq Computer Corp. President Rod Canion has posed: What is the standard now: Compaq and the clones or IBM?

The existing standard seems to be holding. Last month, PS/2 models accounted for a respectable 15% of the personal computers sold in U.S. computer stores, according to market researcher InfoCorp. But two-thirds were the PS/2 Model 30, which does not include the advanced PS/2 features. At the same time, IBM PC-compatible machines were up more than 10% in the first five months of 1987, suggesting that many customers aren't yet inclined to switch over to PS/2.

That's ammunition for Canion and other IBM competitors, who urge PC buyers not to follow IBM automatically. "Just because IBM comes out with something new doesn't mean that you goose-step in line with them," says Max Toy, a former Compaq and IBM executive and now senior vice-presi-



dent of ITT's Xtra Business Systems Div. "We're all saying the same thing," adds Phil White, president of Wyse Technology. These competitors concede that some aspects of the PS/2, such as better graphics, will benefit computer buyers. But they regard with suspicion other features, such as the new Micro Channel for connecting circuit cards. "The big question is 'What's it going to

add?'" asks Tandy Corp. Chairman John V. Roach.

Not much, according to Neil Colvin, founder of Phoenix Technologies Ltd., a Norwood (Mass.) company that sells software needed for cloning IBM PCs. Micro Channel accepts only add-ons designed for it, making existing PC circuit cards obsolete. Colvin says the badly needed speed improvements of Micro Channel can be had with a design that also accommodates the older cards. Phoenix leads a group of computer companies that have proposed such a format as the standard to be sanctioned by a committee of the Institute of Electrical & Electronics Engineers.

While such a committee is bound to have less influence than IBM does, clonemakers are betting that it will make a difference. The most likely scenario, says William D. Kirwin, an analyst with market researcher Gartner Group Inc., is that the market will divide. IBM's top 1,500 mainframe customers, the companies that will use the Micro Channel to connect personal computers to mainframes, will switch to PS/2. "IBM gets very, very territorial about these accounts," says Kirwin. But he thinks that much of the rest of the market may react like Robert G. Castellano, manager of office systems at Readers Digest Assn., who is still mulling over his decision. "I don't think any one company can set the standard any more," Castellano says. "IBM has tried to force our hand, but I have as much power—to buy or not to buy."

By Geoff Lewis in New York