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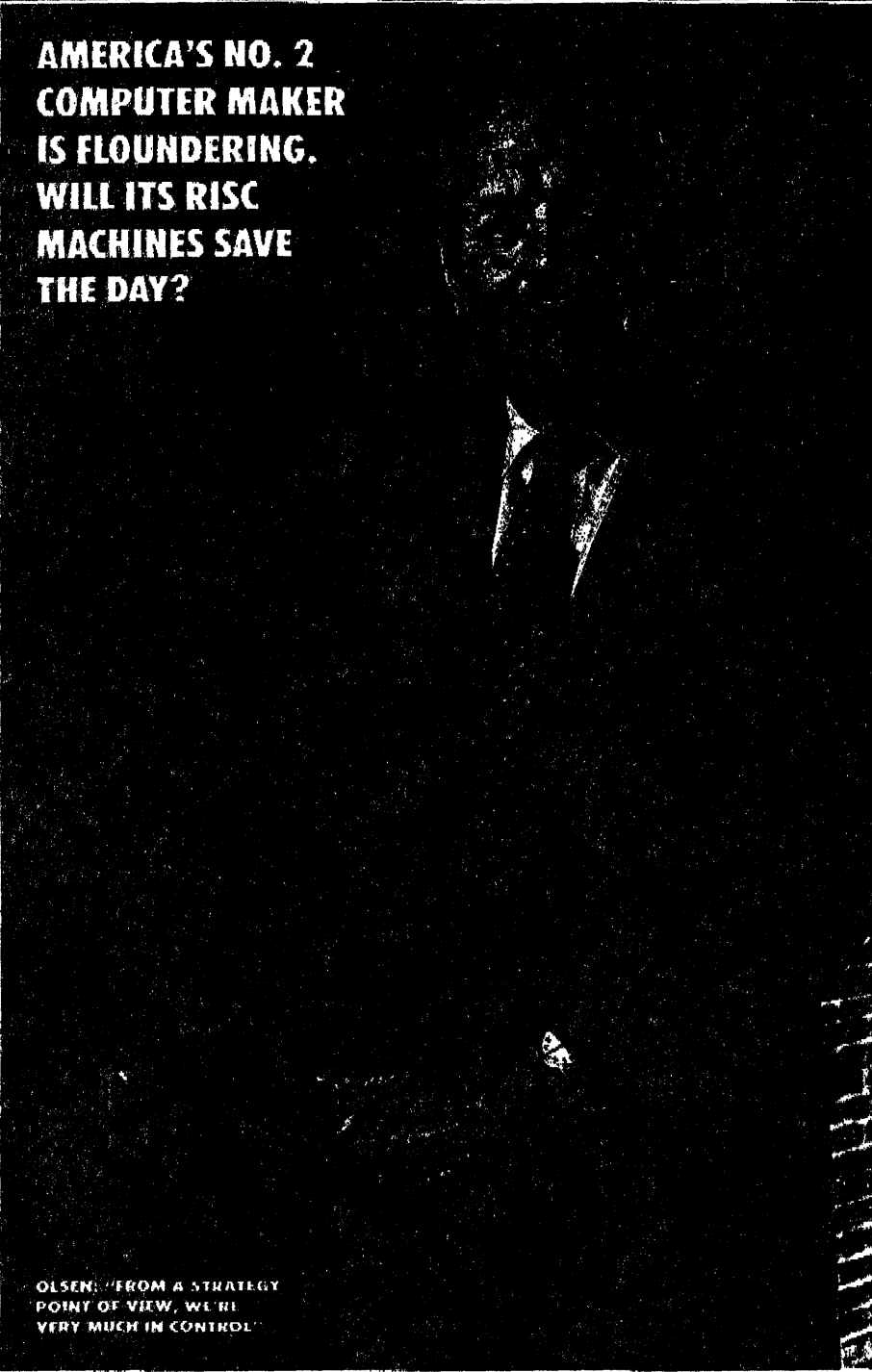
# Top of the News

COMPUTERS

MAY 4, 1992

# CRUNCH TIME AT DEC

**AMERICA'S NO. 2 COMPUTER MAKER IS FLOUNDERING. WILL ITS RISC MACHINES SAVE THE DAY?**



OLSEN: "FROM A STRATEGY POINT OF VIEW, WE'RE VERY MUCH IN CONTROL."

**D**igital Equipment Corp. plans on Apr. 27 to welcome some 25,000 of its most important customers to Boston's World Trade Center for DECworld, a biennial technology carnival that showcases the company's wares. But it won't be anything like DECworld 1987, when the minicomputer maker was at the top of its game. Then, no expense was spared. The company rented all the best hotel rooms for miles around and housed the overflow on the QE2. It even paid to have a pier extended to accommodate the famous ocean liner. Customers and DEC employees mingled for nine days of parties and seminars. There was little pressure to close deals—after all, sales of VAX minicomputers were setting records.

At this year's gathering, the mood is anything but festive. For the first time, DEC's sales force has been given strict orders to invite only real prospects to DECworld—and they've been given quotas for closing deals during the show. The \$14 billion company, once a threatening No. 2 to IBM, is becalmed—and, critics say, rudderless. Minicomputer sales, which together with related soft-

## AT THE MOMENT, MORE PROBLEMS THAN SOLUTIONS

CEO Ken Olsen faces the toughest set of challenges in his 35 years atop the once booming but now shrinking computer giant.

### SERVICES

To get away from falling computer profits, DEC is selling service and consulting. One of its best efforts, sales grew 17% last year.

ware and service fees contribute 90% of the company's revenue, fell 16% last year and tumbled more than 20% in the quarter ended Mar. 28. Forays into mainframes and other new businesses aren't doing well. High costs are producing operating losses. And management seems to be in a perpetual shakeup. **'THE QUARTER FROM HELL.'** That means Chief Executive Kenneth H. Olsen, 66, must preside almost single-handedly over a critical transition to a new technology that could fuel the company's turnaround. But increasingly agitated investors, former employees, and comput-

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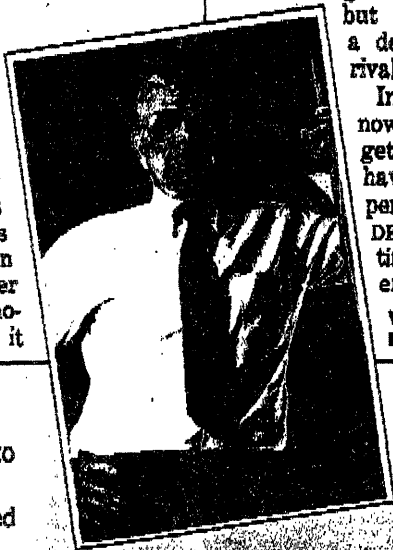
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er-industry gurus question whether Olsen is up to the job. "Ken is panicked. He has no idea what to do here," says Gordon Bell, the designer of the VAX line who resigned in 1988.

Olsen, no surprise, disagrees. "From a strategy point of view, we're very much in control," he says. "History will show this strategy has gotten us to No. 2 or 3 in the industry." Indeed, history is on Olsen's side: The mercurial entrepreneur, who launched the company 35 years ago and is the longest-reigning founder of a major computer company, has proved that he knows how to pull DEC out of a slump. But Olsen has never faced one like this.

The gravity of DEC's situation became clear on Apr. 9, when it stunned Wall Street with a \$294 million quarterly loss—more than three times worse than analysts had expected. Morgan Stanley & Co. computer analyst Steven Milunovich quickly dubbed it



profitable for another year. By Apr. 22, the stock was trading near its six-year low, around 46, giving it a market value of just \$5.6 billion, a fraction of its record of \$26 billion in 1987.

DEC's problems are hardly unique. Other old-line computer makers such as IBM and Unisys Corp. are also struggling to slim down, speed up, and adapt to a world of inexpensive commodity hardware and slim margins. But DEC clearly trails in its response. At the root of its problems: a "matrix" management system of interlocking and overlapping committees. The practice once rated raves from management gurus for flexibility but now has devolved into a debilitating mishmash of rivalries.

Indeed, for three years now, Olsen's attempts to get DEC back on course have kept the company in a perpetual state of flux—DEC has reorganized three times since 1988. As top engineering, sales, and VICE-PRESIDENT SMITH'S INFLUENCE HAS WANED

VAX into major new markets have flopped. A mainframe version of VAX, introduced in late 1989, was once expected to add as much as \$2 billion to annual revenues. In the most recent quarter, it contributed a paltry \$80 million. In "fault-tolerant" computers designed to keep running during component failures, DEC hoped to catapult past market leader Tandem Computer Inc. But it has won just 3% of that business. Both efforts were hamstrung by DEC's failure to choose a single software strategy. HERO WORSHIP. Fitting executives and development groups against one another is vintage Olsen—and a byproduct of the company's matrix management system. A brilliant engineer himself, Olsen has often created rival teams to race one another. The winning team would see its design come to life, and its leader would often emerge as a major influence on Olsen and DEC's strategy—at least for a while. "Ken operates on heroes," says Kurt L. Friedrich, a former DEC software manager who recently joined Hewlett-Packard Co. "He's always looking for someone who has the next great vision." As a result, "the company is

**PERSONAL COMPUTERS**

DEC's biggest flop. It got into PCs in 1982 but missed the IBM-compatibility boat. Tried to sell Tandy, Olivetti, and Intel PCs, with mixed results. DEC may build its own PCs in Taiwan—a risky move

**MARKETING**

DEC's Achilles' heel. By tradition an engineers' company, DEC never marketed well—which became a serious shortcoming as competition for computer sales grew hot

**MANAGEMENT**

Heavy turnover at the top—especially among heirs apparent. DEC has neither a chief financial officer nor a chief technologist. Frequent reorganizations, including one now under way, have increased internal tensions, hurt esprit de corps, and prompted resignations

**MAINFRAME COMPUTING**

DEC jumped into the mainframe software market in 1988, to swipe IBM's customers. But flip-flops confused buyers, who stuck with Big Blue

**MINICOMPUTERS**

DEC's VAX line is its flagship. But the technology is aging, and DEC needs new machines. The successor won't be out until 1993

**SOFTWARE**

Constant changes in software strategy have confused customers and developers. Alliance du jour: a link to software powerhouse Microsoft

**WORKSTATIONS**

DEC has waffled for years over technologies but is now set to sell machines using its own Alpha processor. The chip is fast but requires new software—and rivals are closing the gap

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"the quarter from hell." A week later, William D. Strecker, chief technical officer since 1985, and two other engineering vice-presidents were stripped of their duties. That came close on the heels of resignations by the chief financial officer, a top marketing executive, and a key executive in the personal-computer business. Olsen says there is no pattern to these departures, but investors see them as a sign that DEC is losing the managers it needs to turn itself around.

Analysts now say that even with drastic cuts—including slashing 7,000 people this quarter—the company might not be

marketing managers were shunted from assignment to assignment, the company lost its sense of overall direction. "DEC's competitors," says Milunovich, "view the company like Wile E. Coyote views the Road Runner—as lunch."

Even DEC's share of its core minicomputer market has dropped, while IBM's has jumped from 17% to 28% since 1988. And attempts to push the 15-year-old



**THE DEC SERVER 9011 NETWORKING IS A KEY** fraught with changing faces in strategy," maintains Armando Stettner, a former DEC engineer.

In the past, the system of serial heroes and competing groups served DEC well. The company avoided the catastrophes that befell Wang Laboratories Inc. and Prime Computer Inc. when they bet too heavily on research and development efforts that failed. At its best, Olsen's system

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produced a flood of products that propelled DEC from \$1 billion in revenues to \$12.7 billion from 1977 to 1989.

But the DEC system seems like an anachronism now. When the industry was growing fast and product cycles were relatively slow, there was time to see which design would win out. These days, time is a luxury computer makers can no longer afford.

Take DEC's approach to RISC (reduced instruction-set computing). This new

just delayed ordering a \$500,000 VAX so it can buy an Alpha next year.

What worries investors most is the possibility that chaos within DEC's management might derail Alpha. "They appear to be mismanaging the product transition," says Daniel H. Szente, assistant director for investments for the Ohio State Teachers Retirement System, which holds two million DEC shares.

If DEC fumbles with Alpha, it may be because all those years of competing

marketing manager who's now vice-president for software-product marketing at Sun: "The DEC model is two runners who, when the starting pistol goes off, spend the first 10 seconds beating each other up. The winner is the one who limps across the line." Vice-President for Operations John F. Smith, whose influence at DEC was curtailed this year in a reorganization, plays down the infighting: "From the standpoint of friction between business units, I don't believe there is a problem."

The contentiousness and Olsen's indecisiveness have also made it difficult for DEC to make the deep cost cuts it needs to return to profitability. "These are people doing things in order to protect their jobs," says an executive at a DEC supplier. So despite a three-year effort to slim down, DEC now has just 10,000 fewer workers than the peak of 126,000 in 1989. That's partly because of its buyout of Philips' minicomputer business last year, which added 7,000 employees. DEC

**FOR THE FIRST TIME, DEC'S SALES FORCE HAS BEEN GIVEN STRICT ORDERS TO INVITE ONLY REAL PROSPECTS TO DECWORLD**



chip technology allowed companies such as Sun Microsystems Inc. to build speedy workstations that have been stealing sales from VAX for years. Olsen finally gave the go-ahead in 1987 for Digital's engineers to create their own RISC chip. In typical fashion, in 1988 he also approved a separate effort to develop a RISC workstation using chips from MIPS Computers Systems Inc., and killed the in-house effort. Now, DEC has reversed again: It's backing away from MIPS and pushing Alpha, its own RISC design. The upshot of DEC's zigzags: It holds just 13% of the market.

**RISC BUSINESS.** DEC's latest RISC effort, code-named Alpha, is the key to the company's future (page 88). DEC says the new design not only will give the company a top-performing workstation but also will allow it to replace the aging VAX line. But the first Alpha machines won't be out until early 1993.

Today, that means Alpha is actually doing more harm than good: Customers are reluctant to buy the MIPS-based workstations and, in some cases, VAXes—figuring they'll do better by waiting. ISA Consultants Ltd., a Chicago computer-service company, for instance,

product teams and strategy shifts have driven many talented people from the company. "In DEC, when a project goes down, you go down, and you go down for the count," says Edward E. Roberts, a professor at Massachusetts Institute of Technology. So former DEC managers whose projects were canceled or curtailed—often by Olsen—now are working for competitors.

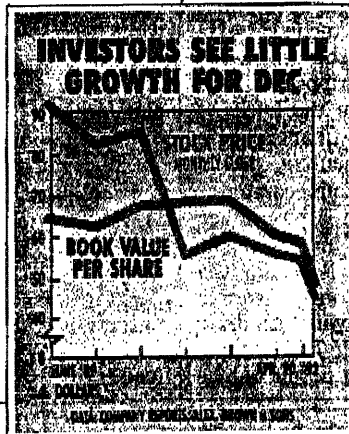
With the prospect of continuing layoffs and budget cuts, the *esprit de corps* that once smoothed over the conflicts between groups has been replaced by intense rivalries. Managers lock horns over resources such as sales or support help, and negotiate political mine fields to do business.

DEC's fledgling disk-drive sales team is a good example. That group recently found itself fighting for a customer against a distributor that DEC's own disk-manufacturing arm had hired. Says Jim Billmaier, a former DEC

now stands out as a high-cost producer with sales per employee of just \$115,000, compared with \$175,000 at Big Blue and \$275,000 at Sun.

**'DISTINCT STRATEGIES.'** Olsen says the company is making an effort to get costs under control. The upshot? Another reorganization. Its thrust is to reduce the array of products that DEC sells and speed new ones to market by combining engineering and marketing into the same business units. Just three years ago, Olsen took the opposite tack, splitting marketing and engineering.

If the reorganizations seem to be piling up, it's because Olsen is not satisfied. "We're not here to keep things going the way they always went," he says. And if analysts think the company is zigzagging, they're missing the point. "We have a number of distinct strategies in [different] areas, and they've got to fit together," Olsen explains. Even now, Olsen's



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rap is not to be dismissed out of hand. In the late 1960s, he guided DEC through wrenching technology and management overhauls to make it king of the minis. In the early 1980s, he toughed out fallout from a failed push into the crucial PC market and a disastrous bookkeeping error that resulted in lost orders. Instead, he focused on exploiting the VAX's networking strengths over IBM's various

incompatible computer lines. That led to DEC's greatest growth spurt, and networking server products are still among its strongest sellers.

To Olsen, DEC is simply in the midst of another cyclical downturn. He says he's not considering stepping aside—or altering his modus operandi. As he has done in the past, he plans to rely on DEC's vast cash resources to see it through.

Even after last year's \$617 million loss, DEC still has \$1.5 billion on hand.

And because Olsen has handpicked its members, DEC's board isn't about to mount an insider coup, à la General Motors Corp. But with so many lieutenants gone or sidelined, it's Olsen alone who will be to blame for DEC's decline—unless he makes a magical comeback.

By Gary McWilliams in Boston

## WILL ALPHA MARK A NEW BEGINNING FOR DEC?

In the 1970s and '80s, Digital Equipment Corp. was the world's top minicomputer company. Then, late in the '80s, DEC found its sales stalling under pressure from powerful desktop workstations, against which DEC's aging VAX computer design couldn't compete. So, the company set to work on a product that would impress its customers and keep them loyal.

The result is Alpha, an all-new design introduced in February. Promoted as the foundation for DEC's most important future computers—from workstations to mainframe-class machines—the technology is designed to sustain DEC for 25 years. At the heart of Alpha is the latest in computer design—reduced instruction-set computing (RISC). That's a way of designing computers so that they can crunch information very quickly, by reducing the number of commands needed to complete a given task. Alpha is at the apex of the RISC performance curve.

Indeed, at first blush, the Alpha microprocessors look scorching hot. DEC says the chips will grind through 150 million instructions per second (MIPS), vs. the competition's processors, which today run in the 25- to 78-MIPS range. What's more, Alpha chips will attack 64 bits of data at a time, not the 32 bits most RISC processors handle today.

**slow sales.** Already, the new computer family has gained customers' attention. Last year, Raymond V. Sasso, chief information officer at J.R. Simplot Co., ruled out buying any more VAX minis. But with Alpha, he says, DEC stands a chance of selling Simplot the RISC machines it now prefers.

Just the same, Alpha can't turn DEC's sagging fortunes around overnight. The first Alpha-based computers aren't due out in volume until early 1993, which could give competitors a chance to match Alpha's performance.

And those early models will be pricey minicomputer-class systems, not cheap workstations that DEC can use to stave off workstation leaders Sun Microsystems Inc. and Hewlett-Packard Co.

Moreover, Alpha's super number-crunching power doesn't help customers unless they can run their software on the computers. And DEC must catch up with software designed for Alpha. That gives Sun and HP a big advantage: They have been shipping their RISC-based computers for several

applications, such as spreadsheet and word processing programs, to run on Alpha-based computers.

Microsoft's backing should help DEC with another challenge: persuading other computer companies to use Alpha in their machines. That's a must for DEC's bottom line, since it will help offset the tremendous costs required to keep a computer architecture such as Alpha up to date over time. DEC, for instance, has begun work on a \$500 million plant to manufacture Alpha

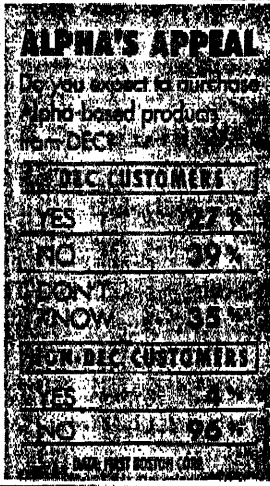
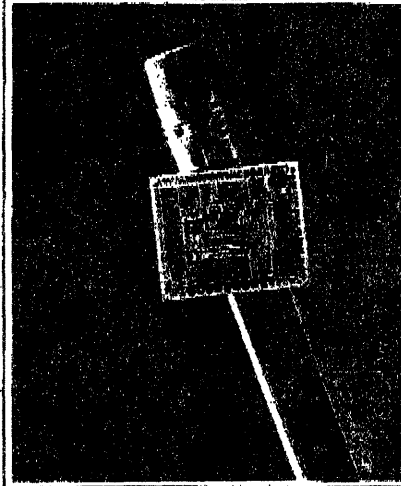
chips. So far, DEC has signed up supercomputer leader Cray Research Inc., which plans to build a so-called massively parallel computer that will gang together hundreds of chips to tackle big scientific problems using Alpha technology. Another Alpha licensee: Japanese workstation maker Kubota Pacific Computer Inc.

**CENTER STAGE.** For now, Alpha is more paper tiger than killer chip: "I don't believe Alpha will be a factor in the marketplace until the 1994 to 1995 time frame," says

HP Vice-President Willem P. Roelandts. That means DEC's VAX will remain at center stage for some time. And in the meantime, the Alpha hoopla is denting VAX sales, which fell more than 20% last quarter, partly because customers are worried Alpha will make the VAX obsolete. "People do not want to buy the old technology, so they're waiting," explains Howard L. Niden, Chicago regional director for Price Waterhouse.

Here's Alpha's ultimate challenge: Capturing customers beyond the current installed base of 500,000 VAXes. As First Boston Corp. analyst Curt Rohrman puts it: "It's hard to grow your company if you don't bring new people into the fold." Indeed, for DEC, that's just about the Alpha and the omega of the situation.

By Gary McWilliams in Boston, with Robert D. Hof in San Francisco



years, and there are sizable software libraries that work on the machines.

To solve the problem, DEC says it will provide customers with a smorgasbord of services and programming tools to smooth their transition between VAX and Alpha. And DEC also will make Alpha run Microsoft Corp.'s Windows NT operating system, a core program that's expected to attract lots of attention from the PC software market. Indeed, on Apr. 24, Microsoft will disclose plans to convert its own PC

**DEC says Alpha machines will whiz past rivals—but they could lose their lead by the time they hit the market.**