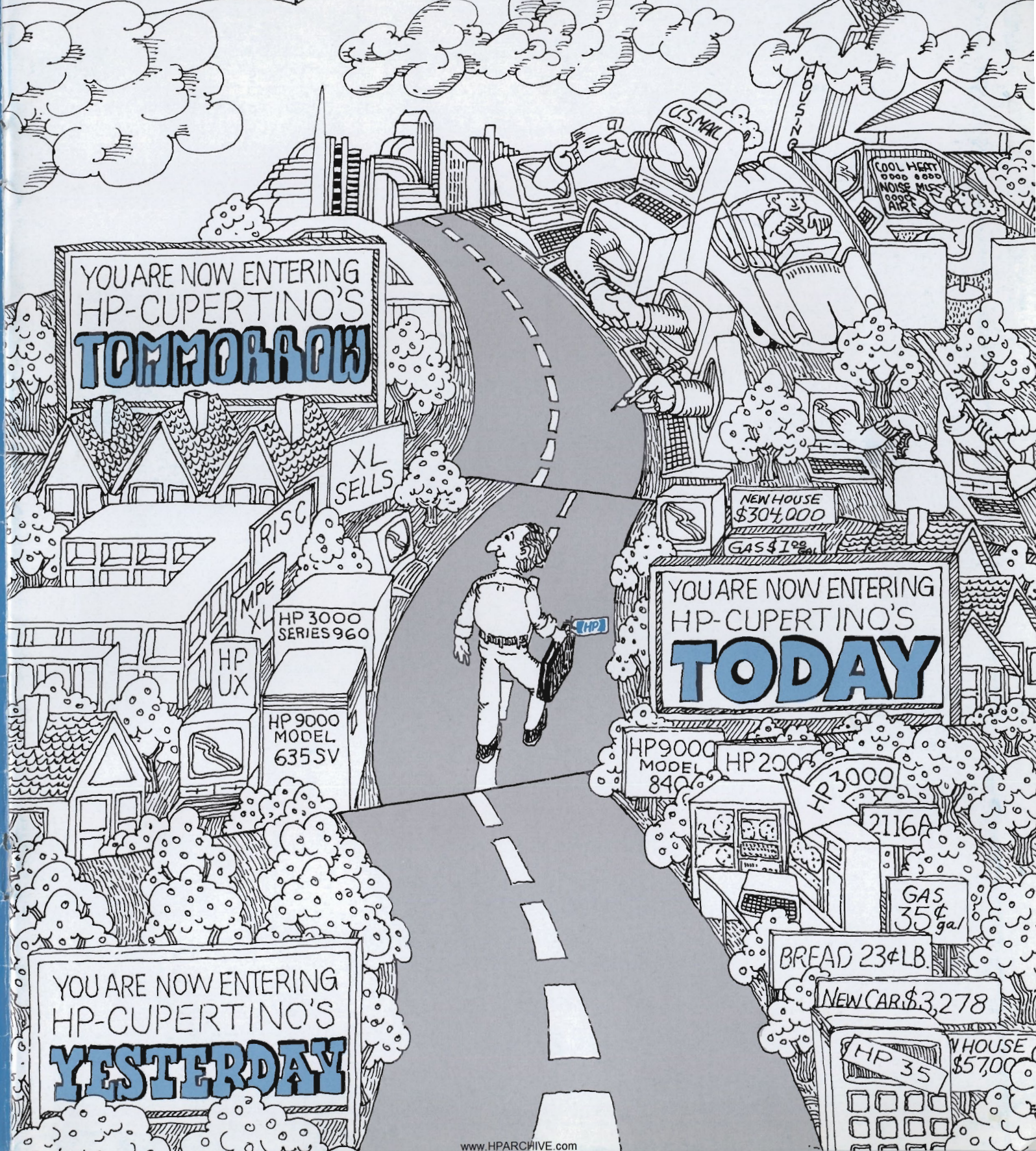


20/50
YEARS IN CUPERTINO YEARS IN BUSINESS

FOR THE PEOPLE
OF HEWLETT-PACKARD
IN CUPERTINO

INSIGHT
NOVEMBER
DECEMBER
1989



YOU ARE NOW ENTERING
HP-CUPERTINO'S
TOMMORROW

YOU ARE NOW ENTERING
HP-CUPERTINO'S
TODAY

YOU ARE NOW ENTERING
HP-CUPERTINO'S
YESTERDAY

From the editor's Vectra

So what else is new?

"There is nothing permanent except change."

Care to guess who is being quoted? Was it:

■ A Wells Fargo bank teller.

■ CSG GM **Wim Roelandts**.

■ Greek philosopher **Heraclitus**.

If you guessed Heraclitus, you were on the money. And the philosopher wrote that in the sixth century... without ever being part of a CSG reorganization or a Networked Systems Sector redeployment experience.

Heraclitus knew hundreds of years ago that Greek armies would constantly "reorganize" their warriors and that elected Greek magistrates would most surely be "redeployed."

What was true in ancient Greece goes double for today. Futurists both inside and outside of HP are predicting that the rate of change will accelerate. "We're literally inventing our own future every day," writes **John Young** in *Measure*. Change, adds former U.S. Secretary of State **George Shultz**, is "large, rapid and pervasive."

As we revisited the past, surveyed the present and tried to envision the future in this special issue of *Insight* celebrating this site's 20th birthday, we encountered at every turn, examples of changes that were "large, rapid and pervasive."

The changes taking place on the Cupertino Site 20 years ago, when this land was covered with apricot trees, seem as dramatic as some of the changes taking place today.

The small group of employees working on our first computer products were truly inventing the future every day. They were working on a technology that was brand new. There was damn little hardware and

software to copy. They invented as they went along. And it was terribly exciting. Sales Development Manager **Willie Austin** was in manufacturing on the site 20 years ago. "We were all driven," he says of those times. "It was hard to believe that I was getting paid for something I enjoyed so much." Engineers were so possessed with the new technology, some of them traveled to Los Angeles just to get some time on a computer since there were so few of them to work with on the site. Another engineer used to steal back to the site and his workbench after his wife and kids went to bed to solve a technical problem.

Steve Hoffman found, when looking at the present state of HP-Cupertino, that one thing remains the same: We're still inventing our future. This time it's the Spectrum Program, RISC architecture, CCE and New-Wave. We're still coping with change... a changing technology, a changing workforce, the changing character of the site. In the 20-year history of the site we've always had manufacturing operations on the site. That won't be the case next year once NCMO completes its move to Roseville.

Another change Steve remarks on is the growing need to protect and enhance our environment. Water is in short supply in our Valley and the Bay Area traffic crunch underscores the importance of looking for alternative ways of getting to work other than the one-car, one-driver scenario we've luxuriated in.

It's true that we're bigger, more sophisticated and better at the business. The company is larger and more bureaucratic perhaps. But the people on site are just as capable, dedicated and as whacky as ever. That hasn't changed.

As for the future, **Rob Youngberg** dusts off his crystal ball and finds the vision pretty murky. He and the experts who are quoted agree that it's almost impossible to accurately predict what the future holds. Rob was amused when he came across artists' conceptions done in the '50s of what life would be like for us in the '80s. Most of the innovations pictured didn't come about and a lot of the modern miracles we've experienced were not predicted. (Rob is disappointed, though, that the idea of servant-robots never made it off the drawing board. With his busy life style he could use one.) Is there anything that won't change in the next 20 years? The fundamentals of the HP way will stay in place, says **Lisa Shuppe**, HP way project manager, if we employees protect and preserve it.

Whatever you say of the future, it — like the past and the present at HP — will be anything but dull. And we'll be here sharing it together. Inventing new things. Improving on existing things. Certainly reorganizing. Perhaps even redeploying again. And, with a little luck, enjoying and appreciating each other. Oh, and, of course, reading *Insight*.

— Shirley Gilbert



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Contributors: Past Section: Shirley Gilbert
Present Section: Steve Hoffman
Future Section: Rob Youngberg
Coordination: Kathy Mirtallo

Graphic Designer: Stephen Osborn, Palo Alto.

Typography: Swan Graphics, Inc., Palo Alto.

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The Insight staff wishes you a happy holiday and a decade of good cheer!

Here *Insight* personnel — left to right: Kathy Mirtallo, Steve Hoffman, Rob Youngberg and Shirley Gilbert — engage in our bimonthly labor of love... bringing *Insight* to you. Not in the picture but never out of our thoughts is Barbara Kawamoto who is on maternity leave. The five of us wish all 5,000 of you a happy holiday season and a bright new year. We hope you enjoy this special issue — where we attempt to stop time — as much as we enjoyed creating it for you. We've got some great *Insights* planned for the '90s. So stayed tuned.

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YESTERDAY

In which a small band of HP computer pioneers make the trek from Palo Alto to the orchards of Cupertino twenty years ago, design and build some products that are powerfully profitable for HP, turn the little site into a giant computer headquarters for the company and share some marvellous moments (remember the Queen and the balloon release?). In short, some historical highlights in the life of the Cupertino Site,

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TODAY

In which the grown-up computer hub experiences an avalanche of change to keep up with the ever-changing computer scene and a changing Silicon Valley...some of it glorious (RISC and New Wave) some of it costly (home prices); some of it scary (a 7.1 earthquake). In short, HP-Cupertino today,

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TOMORROW

In which we dust off our lenses and cast a myopic eye on the future and hope we have more luck than all those scientific magazines of the '50s that had us flying all over the place in our own planes. The future of the HP Way, the future of technology, the site, the office and Cupertino: we asked experts for their insights. Is that how it will be? Let's touch bases in 20 years.

Page 15.

YESTERDAY

WELCOME TO THE APRICOT DIVISION

So what was your 1969 like?

Bill Murphy, director of marketing for the Networked Systems Sector, was just starting at HP's San Diego Division as a service engineer. He was newly married and he and his wife were still taking graduate courses.

Wim Roelandts, VP and GM of the Computer Systems Group, had an eventful '69. He got married, visited the U.S. (Palo Alto) for the first time — he's from Belgium — and switched from being an HP instrument service engineer to computer service engineering.

Dick Love, GM of the Computer Manufacturing Division, had just returned to the Bay Area after a four-year assignment in New Jersey. Dick was appointed business manager for the Asia, Africa, Australasian sales regions. "HP," says Dick, "was just beginning to dabble in engineering-oriented computers."

And where were you?

Were you at Woodstock, slithering in the mud of the greatest rock festival of all time?

Were you at home glued to the set when Apollo 11 astronauts **Neil Armstrong** and **Edwin "Buzz" Aldrin** took man's first walk on the moon.

That year, did you hum: *Leaving On A Jet Plane*; *Good Morning Sunshine*; *Put Your Head On My Shoulder*? Can you still hum them? Do you remember the words?

Did you buy gas that year — or were you too young? If you did it cost 35 cents a gallon. Bread was 23 cents a pound and a new Ford cost \$3,278.

And what was happening in HP 20 years ago?

Dave Packard resigned as chairman of the board and CEO to accept an appointment as U.S. Deputy Secretary of Defense. There were 15,840 employees in the company (and 93,000 today). HP chalked up \$336 million in sales and \$26 million in earnings. Our computer business, just four years old, was just beginning to take off.

Meanwhile, in the "Apricot Division" down in rural Cupertino it was spring. The fruit trees were in riotous bloom. Jackrabbits raced around the site occasionally disrupting the human population by tripping alarms in the two buildings in the midst of orchards. And a small band of HP people worked on the company's first computer products, enjoyed the spring sunshine, played chess, planted gardens, hopped on bicycles to get from one end of the building to another and got to know each other.

Join us on the next few pages for a romp through 20 years of HP-Cupertino experience. It's a tribute to this very special place in a very special time in HP's history.

— *Shirley Gilbert*



Hey! That's our very own Redwood Grove barn

This is the **John Leonard** residence in the late '40s on the property that HP purchased in the late '60s. The barn you see in the picture is our very own restored barn in the Redwood Grove. Leonard built the barn and planted the redwood and pine trees that still stand today in the Redwood Grove.

Most of HP-Cupertino was covered with orchards when we purchased the property in 1968. Prune, apricot and walnut trees abounded. There are pictures showing harvesting of

fruit as early as 1919 on this land. After the fruit was picked, it was transported across the street to the John Leonard Fruit-Packing plant at Wolfe Road and Pruneridge Avenue for drying and packaging. Some 25 farmers owned the 100 acres of land we eventually bought.

Burrell Leonard, John's son and president of Vallco Park, recently held an historical open house at the Leonard Fruit-Packing plant across the street (next to Buildings 49A and B) to acquaint area residents with what it was like in the agricultural Cupertino of the past. (Tandem recently purchased the property.) Burrell Leonard lived in the house shown above. He was the fourth generation Leonard to live on this land.

How in the world DID Cupertino get its name?

Cupertino owes its name and earliest mention in recorded history to the 1776 expedition led by Spaniard **Don Juan Bautista de Anza** from Sonora, Mexico to the Port of San Francisco. De Anza left the majority

of the expeditioners in Monterey and pressed on through the Santa Clara Valley in late March to San Francisco with his diarist and cartographer **Petrus Font** and 28 other men.

When the expedition encamped in what is now Cupertino, Font

christened the creek next to the encampment the "Arroyo San Joseph Cupertino" in honor of his patron, **San Guiseppe** of Cupertino, Italy. The arroyo is now known as Stevens Creek.

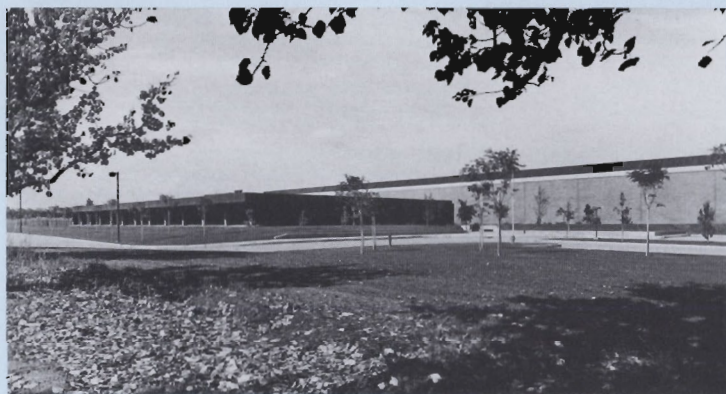
T he way we were in 1969

When employees first came to the Cupertino Site in the spring of '69, these two buildings seemed dwarfed by the acres of fruit trees. Building 40 was an administration building and Building 41 was a manufacturing facility built by Varian Associates to make nine-foot high klystron tubes for early warning radar systems. The technology changed and Varian never occupied the building.

HP purchased the site from Varian Associates and four Cupertino families who jointly owned the property. The consortium was called Valco Park (made up of Varian, and the family names: Leonard, Lester, Craft and Orlando).

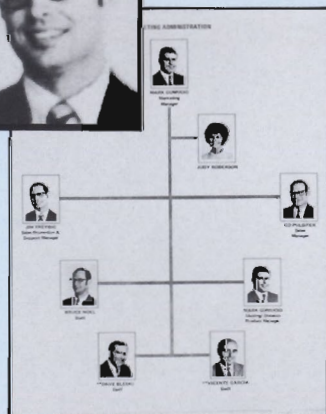
Working here in the late '60s was very different from today. Early site residents remember it only took 20 minutes to get from Palo Alto to Cupertino each morning! Most of the site was taken up by orchards and those here called the Cupertino Division the "Apricot Division." The harvesting of fruit continued even after HP purchased the land and employees remember that farmers became upset when HP people ate some of their produce.

HPers who first came here from Palo Alto helped design and manufacture our company's first computer products. It's been a computer center for the company ever since.



Is that the same Treybig from Tandem? YUP!

The Cupertino Division of 1969 was led by GM **Tom Perkins**. Employees in the division went in for fairly sophisticated org charts in those days. They featured pictures of



everyone in the department.

The Cupertino Marketing Department organization chart included **Jim Treybig** as Sales Promotion and Support Manager. Treybig is back in Cupertino as head of Tandem Computers. He came to HP from Stanford and stayed with our company for five years. "Our goal in those years," he recently told an *Insight* reporter, "was to build a \$100 million computer business in five years and we did." He left to be a venture capitalist but added: "I loved working for HP. It's a great company."

Also part of the first Cupertino Division Marketing Department were **Rich Phillips** and **Larry Turner**, still working on our site in Building 46.

Ed Holland and **Dick Lovlien** were part of our first Engineering Department and are still here. (See Ed's comments about what life was like on the site in '69.)

F un and games down on the Cupertino Site "farm" in '69

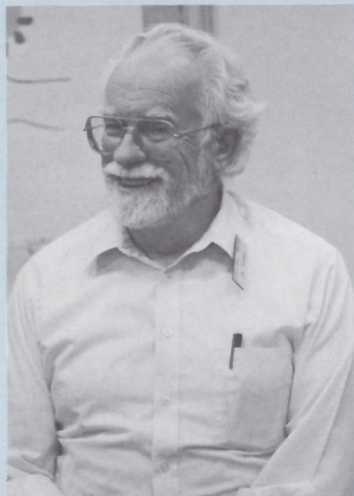
The move to Cupertino in the spring of '69 was front page news in the company's employee publication, *Watt's Current*. The headline read: *Cupertino Activated...* "Their new work site," reported the publication, "is a \$5.5 million plant with 150,000 square feet of floor space located on a 46-acre site at Wolfe and Homestead Roads in Valco Park... The Cupertino Division, headed by Tom Perkins, will transfer all manufacturing of its line of digital computers and related equipment to the new plant."

Some months later, the new site rated its own column called the *Coop Scoop* written by "reporter" **Mickey Leonard**. The column highlights the fly contest in the scheduling area. "Our building," wrote

Mickey, "is surrounded by orchards and we do have a 'small problem' with flies, crickets, etc. Well, the schedulers brought in their fly swatters and prepared to do battle. Just checked the contest chart and **Chuck Quanz** is far in the lead with 22 followed by **Neil Sinkman** with 15; **Ralph Sierra**, 8; **Sunny Morimoto**, 7; **Karen Young**, 4 and **Ron Grace**, **Dag Lundervold** and **Sue McBride** bringing up the rear with 2, 1 and 1 respectively. The winner gets a brand new — are you ready — fly swatter!"

Looking back with Jim Taraldson, Test Engineer, NCMO

"I came down here to work on our first computers. It was very different from Palo Alto. And very beautiful. The site was almost all orchards and they were in full bloom when we first came. It was like working in the country. There were no fences and no gates and I remember people from the bank at Valco Village would come over at lunch and eat in our cafeteria."



outside of the site too — even where Tandem is today. I remember we had a student from a university visiting with us on the day that we rewarded everyone for moving down to Cupertino. We served champagne at our coffee break. He said: 'I've got to join this company. It's great!' And he did."

Looking back with Willie Austin, Sales Development Manager

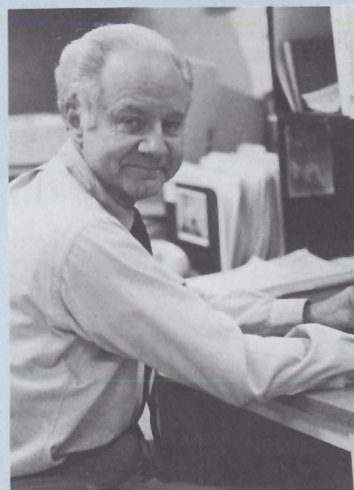
"The manufacturing building we moved into down here was like a big barn. It seemed really huge to us manufacturing employees. There was so much open space that we used a bicycle to get from place to



place. There was also so much land around us that many employees started their own gardens. They would harvest all these great vegetables and share them. I remember we had a lot of chess fanatics here then. The boards would pop up at break and at noon and people would huddle over them. You really felt as if you were part of something new and exciting: a new place and the new computer business. We were all driven — it was hard to believe that I was getting paid for something I enjoyed so much."

Looking back with Ed Holland, Product Support Manager, STD

"I remember it was pretty well all orchards down here. We had a jack-rabbit problem for awhile. The jack-rabbits would set off the alarms in Building 40. There were orchards



Cupertino employees worked on HP's first computer products

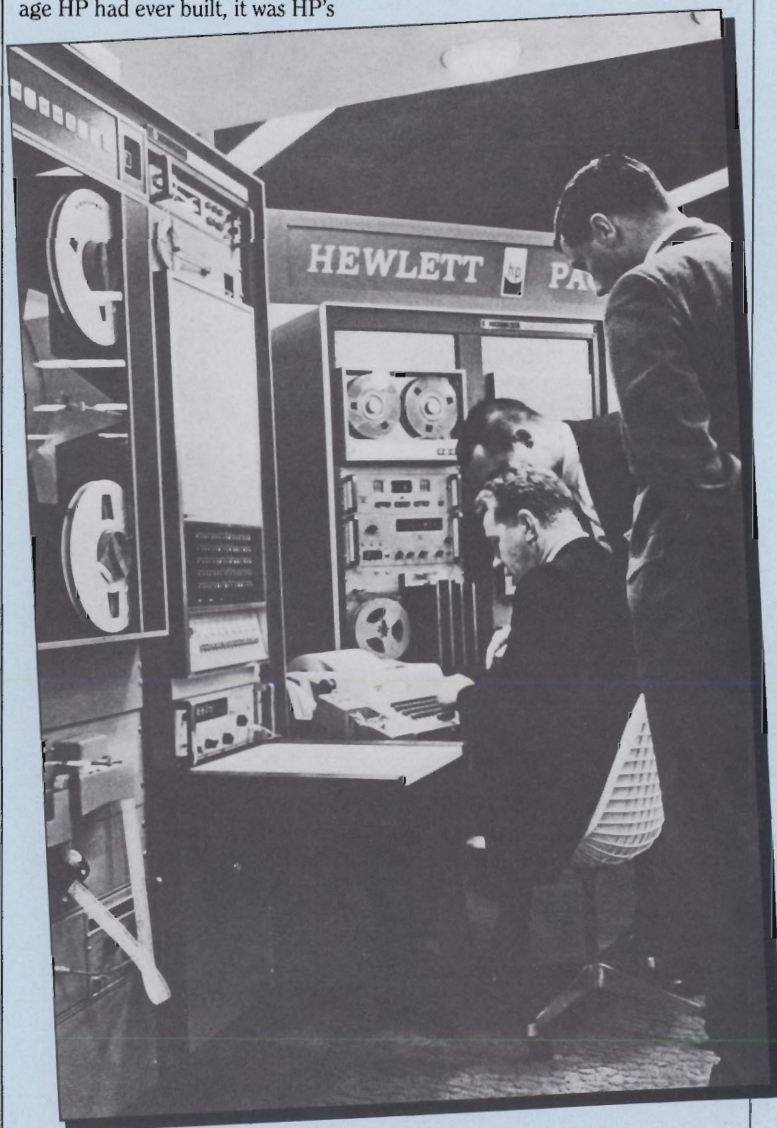
In 1969, HP's computer business was just three years old. HP unveiled its first computer product — the 2116A pictured below — in 1966. **Dave Packard** became convinced in the mid-60s that computers were the wave of the future. He set the wheels in motion for the design of HP's first computer designed to automate our instrumentation systems. It cost about \$25,000 to \$50,000, depending on options, had 8K bytes of memory, was just over three feet tall and weighed about 500 pounds.

Since the 2116A was an instrumentation controller designed to fit into crowded working conditions, its circuitry had to be compactly designed into its door. The machine involved several firsts for the company: it was the largest single mechanical package HP had ever built, it was HP's

first use of integrated circuits and the first time HP had developed a FORTRAN compiler with associated software.

The 2116 was known for its ruggedness. "Talk about well built," says **Ed Holland**, who worked on the first machines. "When one of the stationwagons designed to offer on-site demonstrations to customers was in an accident, the salesman had to be rushed to the hospital but the machine was up and working after repair of one broken wire."

The 2116 sold very well. To add to this first success, in 1968 HP introduced its first commercial product, the HP 2000A. It was a time-sharing system — a first of its kind in the minicomputer field — that was particularly well qualified for the educational market.

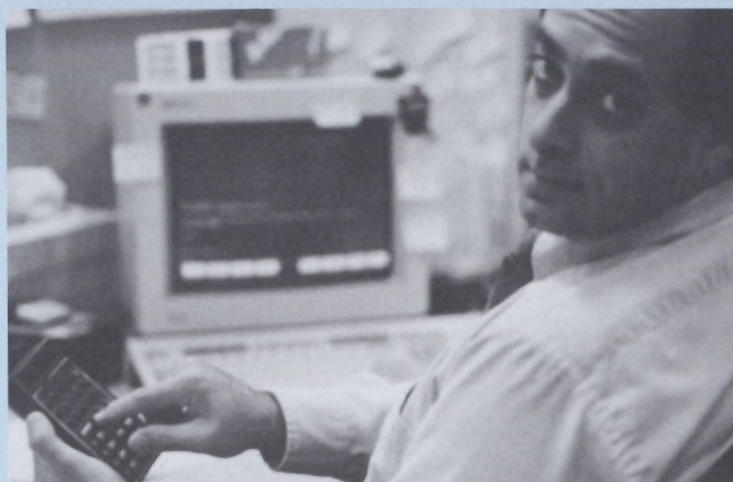


I t takes a licking...but it keeps on ticking

When sales development engineer **Alan Falk** heard that the company's first calculator — the HP-35 — was prototyped and built in Cupertino in 1972, he brought it to show to people at our Cupertino Open House on October 14th. Alan gave tours to folks in the community in our Demo Center. When he got to the calculator section and took out his old HP-35, Alan was delighted to discover that the batteries still held a charge and that the calculator still worked. "It was nice," says Alan, "to turn it on and show that it still lights up!" Alan adds that the calculator was selling for \$395 at the time.

HP invented the pocket calculator: The HP-35 was the world's first scientific handheld calculator. It virtually made the engineer's slide rule obsolete. Bill Hewlett is credited with developing the idea — he asked R&D engineers to come back to him with a slide rule that fit into his shirt pocket. And they did!

Marga Stern, international relocations specialist in Site Personnel, worked on those first calculators in our leased facility across the street (Buildings 49A and B). She reminisces with us about those days in the early '70s: "I worked on the production line making the HP-35.



What I remember most is the tremendous enthusiasm we had for our work. It was fantastic. We had so many orders we all had to work overtime on Saturdays. But we all enjoyed it because it gave us a chance to do a lot of steps in the process and it was fun. We all worked together so well and we tried so hard to see if we could finish all the orders we were given. And when we did, someone rang a big bell in celebration and we would all have donuts or our boss would buy us a big box of chocolates. What a special place it was to work!"



Black Student Day: A 16-year tradition

Black Student Day started back in 1973, just four years after we moved down to Cupertino. This picture shows students enjoying some hands-on experiences with our computers in 1977. The annual event began when several Cupertino Site black managers became concerned over the fact that so few black high school students seemed to be entering the engineering and computer science fields. They decided to invite black students to the site one day a year from the Eastside Union High School District in San Jose and allow them to get some firsthand experience with HP philosophy, people and computers. Each year the program gets better, more sophisticated and receives greater support from black employees across the site. A typical Black Student Day will include a well-known speaker, workshops on careers in high technology, tours of the site, some form of entertainment and plenty of food and good conversation with HP employees.



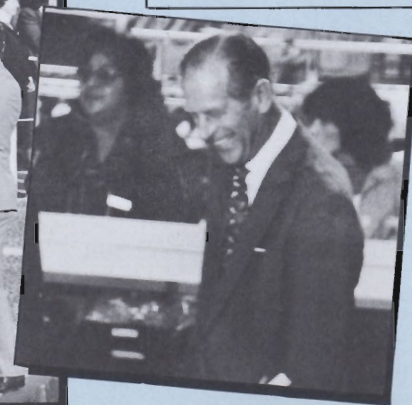
The Queen of England comes to call

Thursday, March 3rd 1983, is a day that Cupertino site employees still talk about: the day **Queen Elizabeth II** and the **Duke of Edinburgh** visited the Cupertino Site. The Queen was welcomed by HP co-founder **Dave Packard** and Cupertino Mayor **John Gatto**.

Her Royal Highness and Prince Philip were privately briefed by Dave Packard on the way computers are made, saw how integrated circuits are produced, visited the manufacturing line and saw some of our new products in action. Queen Elizabeth, after watching a Data Systems Division employee hand-solder a capacitor on an IC leg, commented: "I'll bet you're very handy with a needle."

Hundreds of employees cheered the Queen and Prince Philip as they walked by, secret servicemen seemed to be everywhere and dogs sniffed for bombs. The site was completely shut down from 1:30 to

4:00 p.m. and no one could enter during that time except the royal party. One employee, who chatted with Prince Philip, found him friendly, outgoing and very pleasant with a "great suntan."



The HP 3000: A Cupertino Site phenomenon

The product most associated with the Cupertino site is the HP 3000, one of HP's most popular and profitable computer offerings. The very successful minicomputer was designed and introduced from the site in 1972, withdrawn for redesign to meet HP performance standards and re-introduced in October, 1973.

By 1982, the HP 3000 was the fifth most widely used business computer in the nation. Ten years after that first introduction — on October 1, 1982 — the site celebrated the product's 10-year-anniversary and 10,000th shipment with a giant balloon release and employee celebration

that had the more than 1,800 employees on site form a balloon-laden "10,000" and HP logo. At a given signal, the 15,000 balloons were released into the atmosphere. Afterwards, lunch was served in the Cupertino Quad followed by music, dancing and socializing.



Spectrum gets a royal sendoff

This "Future Begins Now" poster marks the culmination of years of work for the hundreds of employees on the Cupertino site who helped make HP's Spectrum program a reality. The HP Precision Architecture project cost the company more than \$250 million over five years — HP's most expensive R&D effort ever. On Thursday, November 20th, 1986 the site held an "840" party that will be long remembered. Over 5,000 site employees gathered in



the Cupertino courtyard to celebrate the first shipment of a Spectrum program product: the HP 9000, model 840. Balloons were released (balloons are always a site favorite), trumpets sounded, a futuristic truck rolled out of the site with its precious Spectrum cargo watched over by a person from the future complete in silver moon suit with HP logo. The first Spectrum product to come off the line was shipped to Bell Canada in Montreal. And it got a royal sendoff.

HP logos through the ages: Can you guess when each was used?

Here are six HP logos we've used in the last 50 years. Can you guess the year each was introduced? See upside-down box at the end of the history section for answers.



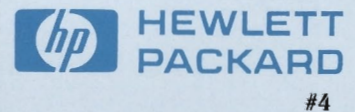
#1



#2



#3



#4



#5

- Testing your logotype IQ
- #1: Introduced in 1946.
 - #2: Debuted in 1967.
 - #3: Premiered in 1968.
 - #4: Our current logo: introduced in 1979.
 - #5: Came out in 1941.

TODAY

THINKING AND ACTING ANEW

Abraham Lincoln, reflecting on the need to adapt to changing times, once said, "As our case is new, so must we think anew and act anew." More than a century ago, he knew how to cope with change.

We've experienced plenty of change at HP. Our company has transformed its product mix dramatically in the last 20 years. From an instrument company, we have clearly staked our claim in the computer business. Today, two-thirds of our total revenue comes from computer-related business. With such a high percentage of computer activity here on our site, it's no wonder we're affected by the storm of change taking place in the industry.

As **John Young** mentioned in the latest profit-sharing announcement, computing power is shifting to the desktop. To accommodate this trend, HP has increased its activities in the workstation and personal computer markets and has shown its thorough support of standards — the linchpin of multi-vendor computing.

Meanwhile, HP-Cupertino people have handled the dizzying pace with spirit and innovation. Recent introductions include the low-end Unix®-based HP 9000 Model 635SV server, the high-end HP 3000 Series 960 commercial minicomputer and improved network capabilities. All mark HP's responsiveness to consumer demands.

In addition to the challenges of a dynamic business picture, HP-Cupertino people have had to face quakes, droughts and lofty prices for homes; the costs of living in this wonderful valley.

Fortunately, we've also had cause for celebration. We've been in business for 50 years — 20 years in Cupertino. We've established a well-respected position in the RISC computer market. We made it through nature's latest shake-up. With each hurdle, we're learning and preparing for the next.

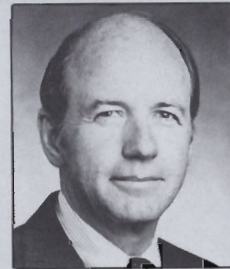
No matter how much we prepare, though, our "case" will always be a new one. And, as Lincoln said, there's no doubt we'll have to vary, modify, evolve, grow, mature, adapt and adjust the way we're used to doing things.

— by Steve Hoffman

TOP THREE CHALLENGES FOR HP

What are HP's top three challenges in today's dynamic computer industry?

Here they are according to **Dean Morton**, HP's executive vice president, chief operating officer and head of our Computer Business Organization:



1

Profitable growth.

2

Managing the transition to the new environment of cooperative computing and truly distributed system architecture.

3

Making wise choices among investment alternatives.

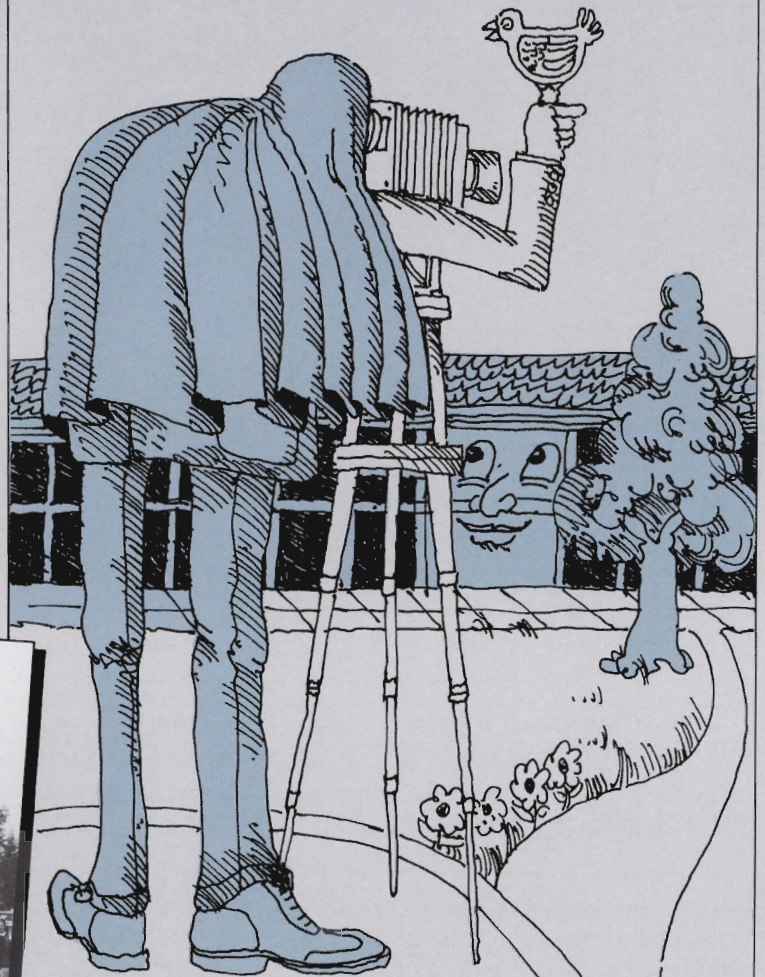
OUR FAVORITE YEAR: 20/50



Fifty Years of Looking to the Future

January 1st, 1989 ushered in a special year for HP-Cupertino employees. We celebrated 50 years of business and 20 years on the Cupertino Site. The celebration took many forms: 50th anniversary flag-raising ceremonies, the international event in Palo Alto, Cupertino Site's 20/50 champagne celebration, commemorative "50" pins for HP-Cupertino employees, a special anniversary INTEREX conference in San Francisco (the opening ceremonies were beamed live to HP-Cupertino), a 20/50 reception for community leaders and an Open House for our neighbors in the City of Cupertino. Throughout the year HP employees, customers and neighbors took the opportunity to congratulate the company on a remarkable first 50 years.

A SNAPSHOT OF THE SITE



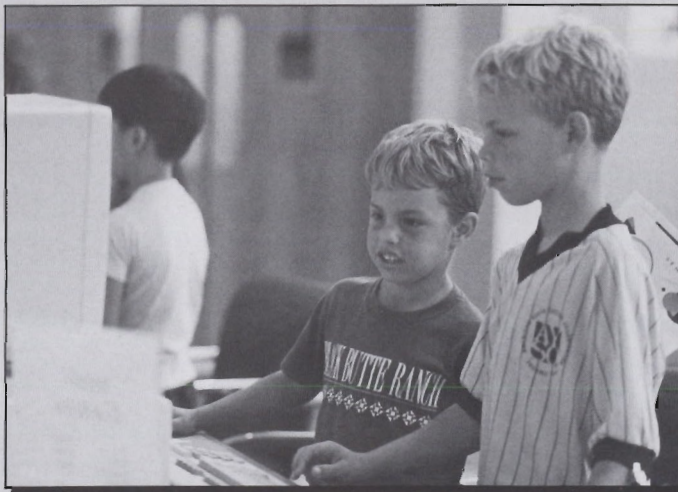
Number of employees: **approximately 4,700**
 Average age: **36.2 years**
 Average length of service: **7.6 years**
 Percentage of employees who are women: **43**
 Number of men to number of women: **4:3**
 Percentage of employees who live in San Jose: **31**
 Percentage who live in San Francisco: **2**

Total acreage of the site: **97**
 Number of buildings: **13** (nine HP-owned and four leased)
 Acres of office space: **28**



Cindy Wilber unfurls the 50th anniversary flag as Willie Austin, Orrin Mahoney and a crowd in front of Building 46 look on. Cindy, in Cupertino Site Personnel, and Willie, in the U.S. Marketing Center, have both worked at the Cupertino Site since it opened its doors in 1969.

To celebrate our 20 years in Cupertino and 50 years in business, HP-Cupertino opened its doors to the community of Cupertino. Hundreds of neighbors — young and old — turned out to tour the Demonstration Center, tinker with PCs and learn more about Hewlett-Packard. These two young visitors tested their skills in the Vectra PC game room.



Number of phone calls from our site in a month: **2,800,000**
 Number of Xeroxes made in one month: **2,000,000**
 The HPDesk load in one month: **1,340,000**
 Energy consumption in kilowatts of electricity per month: **7,100,000**

HP-PA: PRECISELY WHAT CUSTOMERS WANTED

In 1986, HP began shipping its HP Precision Architecture (HP-PA) RISC-based computer systems. We were the first major computer vendor to make a full product-line commitment to RISC (reduced-instruction-set computing), and the press couldn't help but write about the "risk" HP was taking.

Today, with RISC-based computers ranging from workstations to servers and high-performance multi-user computing systems, HP has garnered a 41 percent share of the growing RISC-based computer market. With 16 HP-PA computer systems and two operating systems (MPE XL and HP-UX), HP leads the RISC market with more than twice the market share of any competitor.

In addition to price/performance advantages over CISC-based (complex-instruction-set computing) systems, RISC boasts higher reliability, simpler maintenance requirements and improved time-to-market development cycles.

In the last 12 months, HP has improved high-end system performance by more than 100 percent. HP's latest HP-PA commercial system, the HP 3000 Series 960,

develop a new, higher-speed chip set based on HP's RISC technology and Hitachi's advanced semiconductor and circuit-design technology. This marks the first time HP has

announced a licensing agreement with Samsung whereby the two companies will co-develop and Samsung will manufacture RISC chip sets that use fewer chips than the current HP-PA chip sets for computer systems at the low end of the market. "Samsung is an ideal partner," explains **Low Platt**, HP's executive vice president and head of the Computer Products Sector, "because it has the experience and resources required to provide low-cost, high-volume manufacturing, advanced semiconductor technology and fast time-to-market."

NO RISC NO FUN



delivers more than twice the performance of an IBM AS/400 Model B70 minicomputer.

Strategic partnerships

To reinforce the architecture's breadth and long-term development potential, HP has expanded the scope of HP-PA with recently announced joint arrangements with Hitachi Ltd. and Samsung Electronics Co. Ltd.

Hitachi and HP will jointly

licensed our HP-PA technology to another company. **Wim Roelands**, general manager of the Computer Systems Group, sees this as an opportunity to accelerate and expand HP's RISC product-development cycle, share R&D costs and reduce time-to-market. Wim calls it "a new, more aggressive strategy" to extend the HP-PA product line and strengthen our position in the computer marketplace.

Less than two weeks later, HP

ALL THE RAVE ABOUT HP'S NewWave

Bob Frankenberg, general manager of the Information Networks Group, on the need for NewWave:

"Open architectures, scalable systems, universal systems, and multi-vendor compatibility are the new directions for the future. But users will never wring the most from their computing investments unless information systems become much easier to use."

From the August 28, 1989, issue of *MIS Week*:

"Hewlett-Packard's long awaited Microsoft® windows-based NewWave desktop manager creates an application environment that integrates, enhances and launches MS-DOS, Microsoft® and NewWave-specific applications. NewWave features extensive object manipulation capabilities supporting the creation of compound documents and multimedia presentations.

"You've heard it before, but this time it's for real. This is the year of the object. Hewlett-Packard's NewWave is going to be the fore-runner for a lot of exciting things for the 1990s."

From an editorial entitled "HP Delivers Substance, Not Promises, in NewWave," in the September 4, 1989, issue of *PC Week*:

"'Nothing,' said Victor Hugo, 'is more powerful than an idea whose time has come.' Amen. And nothing is more welcome to our industry than a product that delivers on time and in full, while representing true innovation and growth in the here and now."

COMMUTE ALTERNATIVES

With post-earthquake traffic making the roads more difficult to traverse than ever before, it seems that no commute alternative is too outrageous these days. This new wave bike was a hit at this year's Health

Fair, but hasn't quite made it onto commute hour roads. HP continues to encourage its employees to use alternatives to solo driving such as carpooling, vanpooling, Caltrain, County Transit, cycling and walking.

The site's shuttle program was recently honored by a proclamation from the mayor of Cupertino citing its contribution to reducing traffic in the area.



PARENTING MADE A LITTLE EASIER

Like other workers across the country today, many employees on the Cupertino Site face the difficult task of juggling a career and parenting. But the Site Working Parent Network, which was formed in 1987, is making that job a little bit more manageable.

Over 300 Cupertino Site employees on the Working Parent Network share information about child care availabilities and parenting issues over HP Desk. Meetings are held on a regular basis, and guest speakers have presented valuable information on a range of topics including child

safety, the great child care hunt, the wonders of reading and how to communicate with your teen-ager. One of the most popular events for parents and their children during 1989 was a picnic lunch in the Redwood Grove and a puppet show presented by some local puppeteers.



HP staked its future on the MPE XL operating system for increased sales of the HP 3000 minicomputer. This new operating system, the heart of new HP-PA commercial systems, has landed on its feet.

Some of the big deals leveraged off CSY's HP 3000 this past year include: State Farm (\$30 million), American Airlines (\$18 million), 3M (\$18 million) and Waste Management (\$15 million).

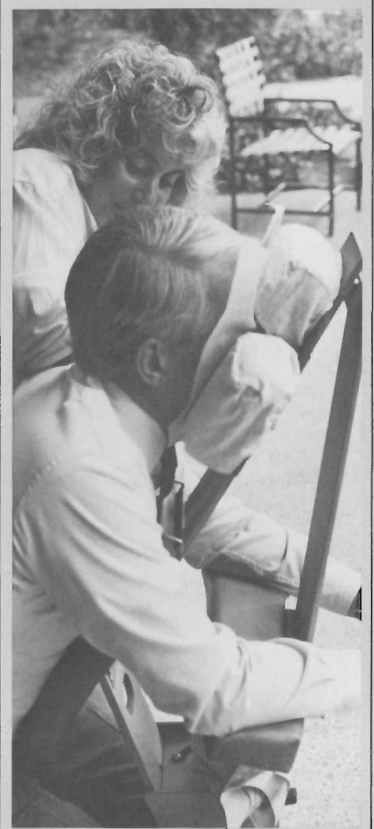
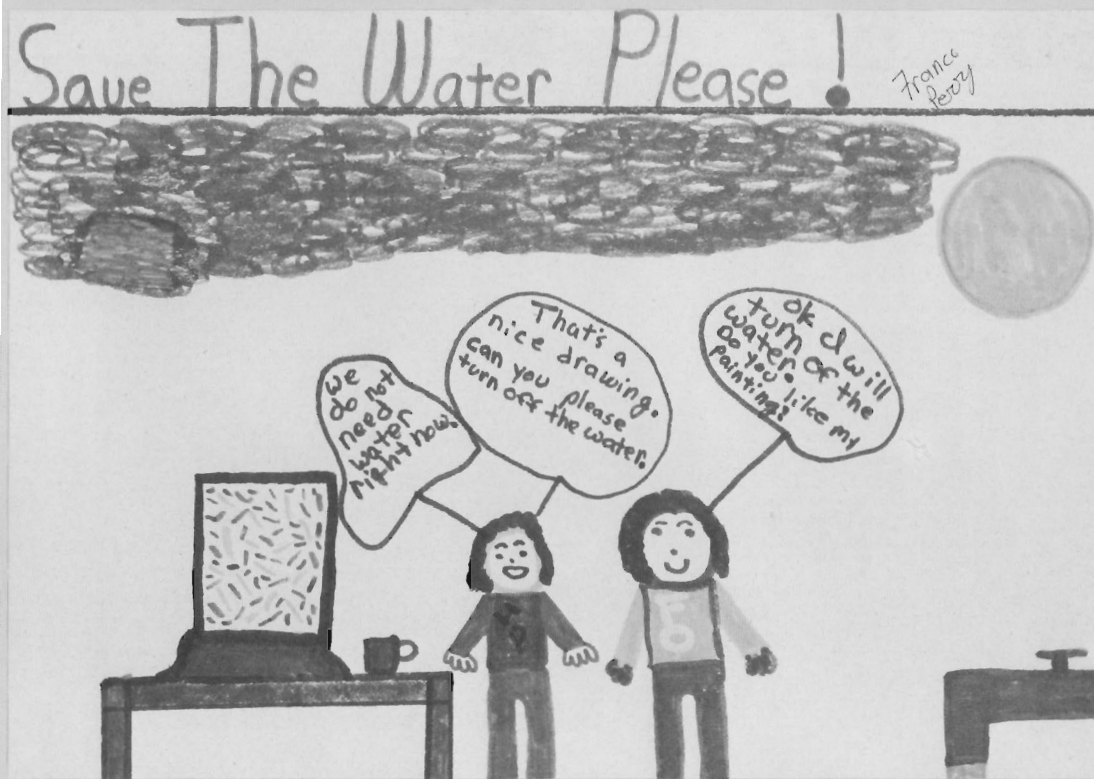
The rallying cry that rings true is "XL SELLS." Special thanks go to MXO lab engineer **Tony Hunt**, who coined this slogan for CSY earlier in the year.

THE PRICE YOU PAY

Excellent schools, nearby shopping, freeway access and beautiful scenery all add up to a high quality of life here in the City of Cupertino. The price tag? According to Fox & Carskadon Better Homes & Gardens, the average home price in Cupertino is about \$304,000.

Twenty years ago, when this area boasted more bark than bytes, the average cost of a home was \$27,856, according to figures from the San Jose Real Estate Board.





Ever have one of those days? Cupertino Site Health Services invited twice the number of massage experts to this year's Health Fair.

Students from Cupertino's Fremont Older Elementary School captured the spirit of this past summer with a special poster series about saving water. Through Project H.E.L.P. (HP-Cupertino Educational Liaison Program), employees volunteer their time, patience and enthusiasm as tutors at Fremont Older and Hyde Junior High School. Our water conservation efforts, incidentally, resulted in a 28 percent reduction in water usage across the site. Forecasters call for an unusually dry winter, so we may have to supply the elementary school with extra crayons for next summer's conservation campaign.

GUESS WHO CAME TO VISIT?

In addition to the close to 5,000 employees who work here at the Cupertino Site, we have guests. Lots of them. Some of the more famous visitors to the Cupertino Site include **Queen Elizabeth of England**, the **Duke and Duchess of Luxembourg** and the **King of Denmark**. Just this year, **Sergie Akhromeyev**, who is

Soviet leader **Mikhail Gorbachev's** senior military advisor, visited HP-Cupertino. Co-founder **Bill Hewlett** and **Dick Love**, general manager of the Computer Manufacturing Division, hosted the visit of Mr. Akhromeyev and his American friend, former U.S. Secretary of State **George Schultz**.



Dick Love (left) highlights the principles of Just-In-Time manufacturing for Soviet guest Sergie Akhromeyev.



Ain't nobody here but us chickens: **Gail Lowell (IND)** and **Liz Hanes (BND)**, feathers and all, performed at this year's Cupertino Site United Way festival. For two years in a row, the Cupertino Site has come together for a site-wide United Way campaign. The money raised gave the community a boost; the clucking chickens, comic juggler, guitarists and other rogues of the employee entertainment world gave our spirits a lift.

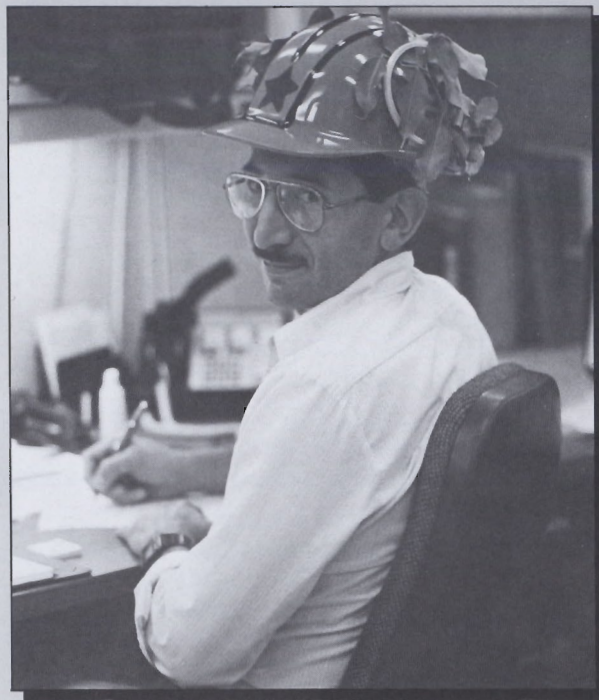
THE (NEARLY) BIG ONE

The Cupertino Site fared remarkably well through the October 17, 1989, earthquake. The 7.1 temblor shook loose some ceiling tiles and overturned some tape racks, among other things, but there were only four reported injuries and none too severe. The total estimated bill for

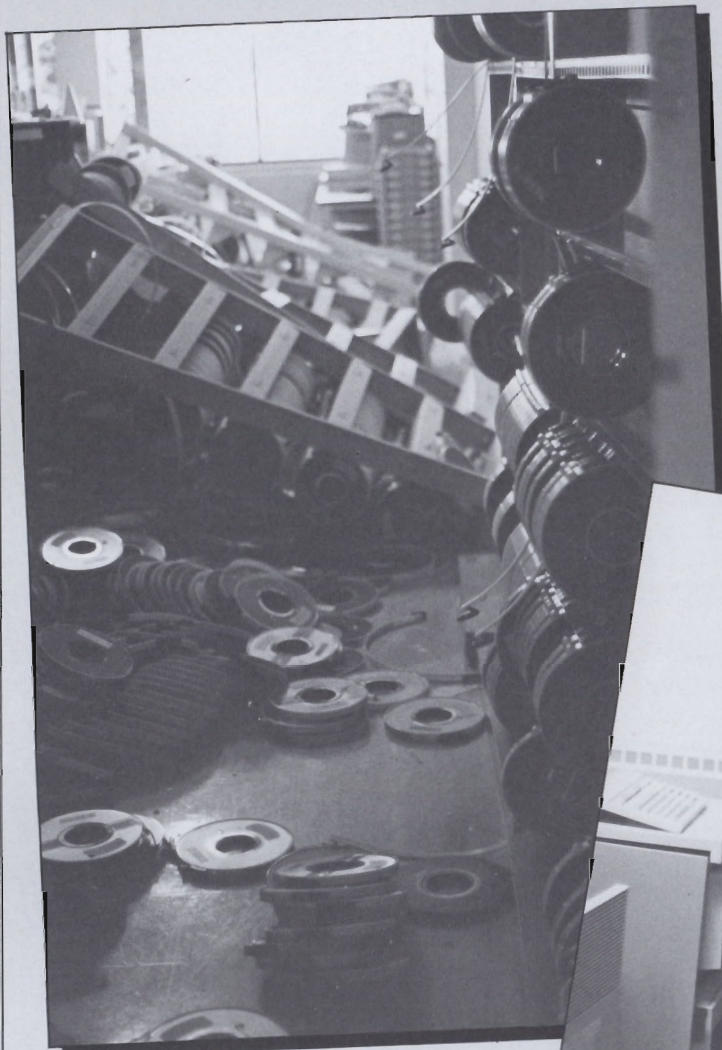
repairs comes to nearly \$1.3 million for our site.

Some of the lessons we learned? After the shaking stops, you should leave the building. (You can finish that report in the morning.)

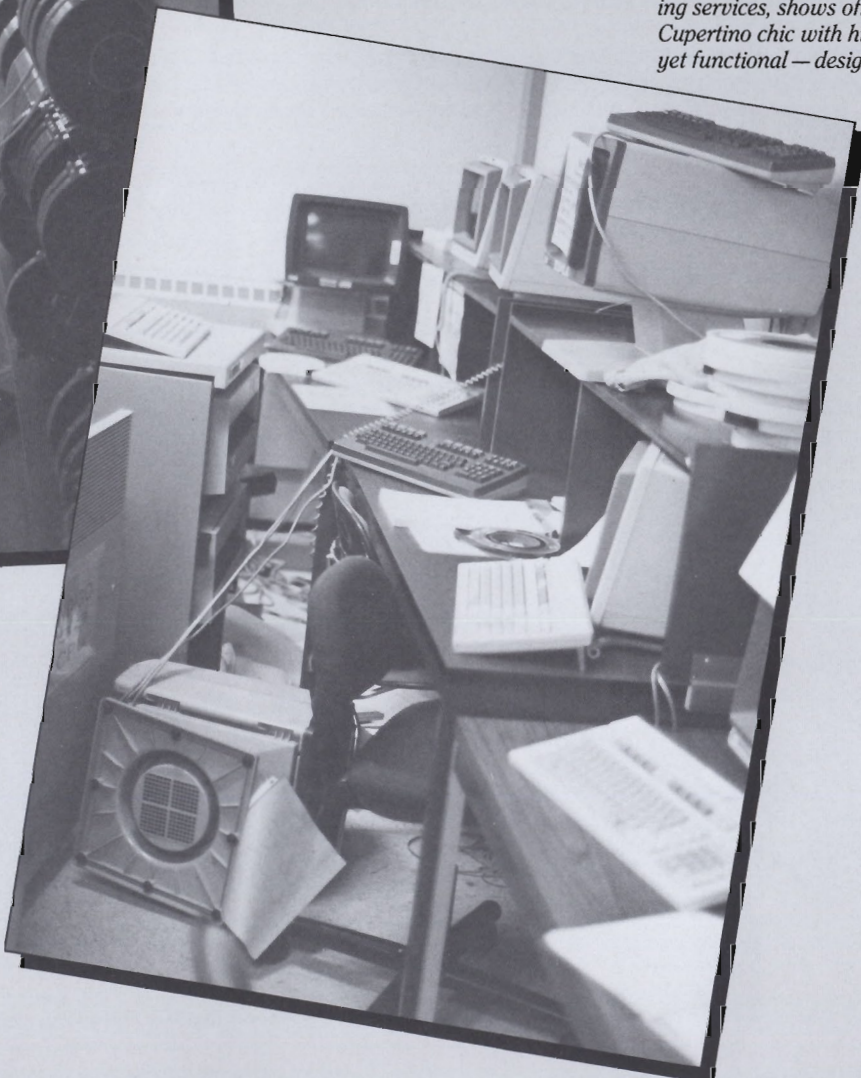
If it's tall and not bolted down, it'll probably fall.



Who cares what's hot in Paris? Frank Castro, from CSY engineering services, shows off the latest in Cupertino chic with his stylish — yet functional — designer hardhat.



Tape racks in Building 47 — before they were bolted to the walls.



A terminal in a computer room in Building 43 tried to get under a table.

TOMORROW

IT'LL BRING CHANGES, BUT WHAT CHANGES?

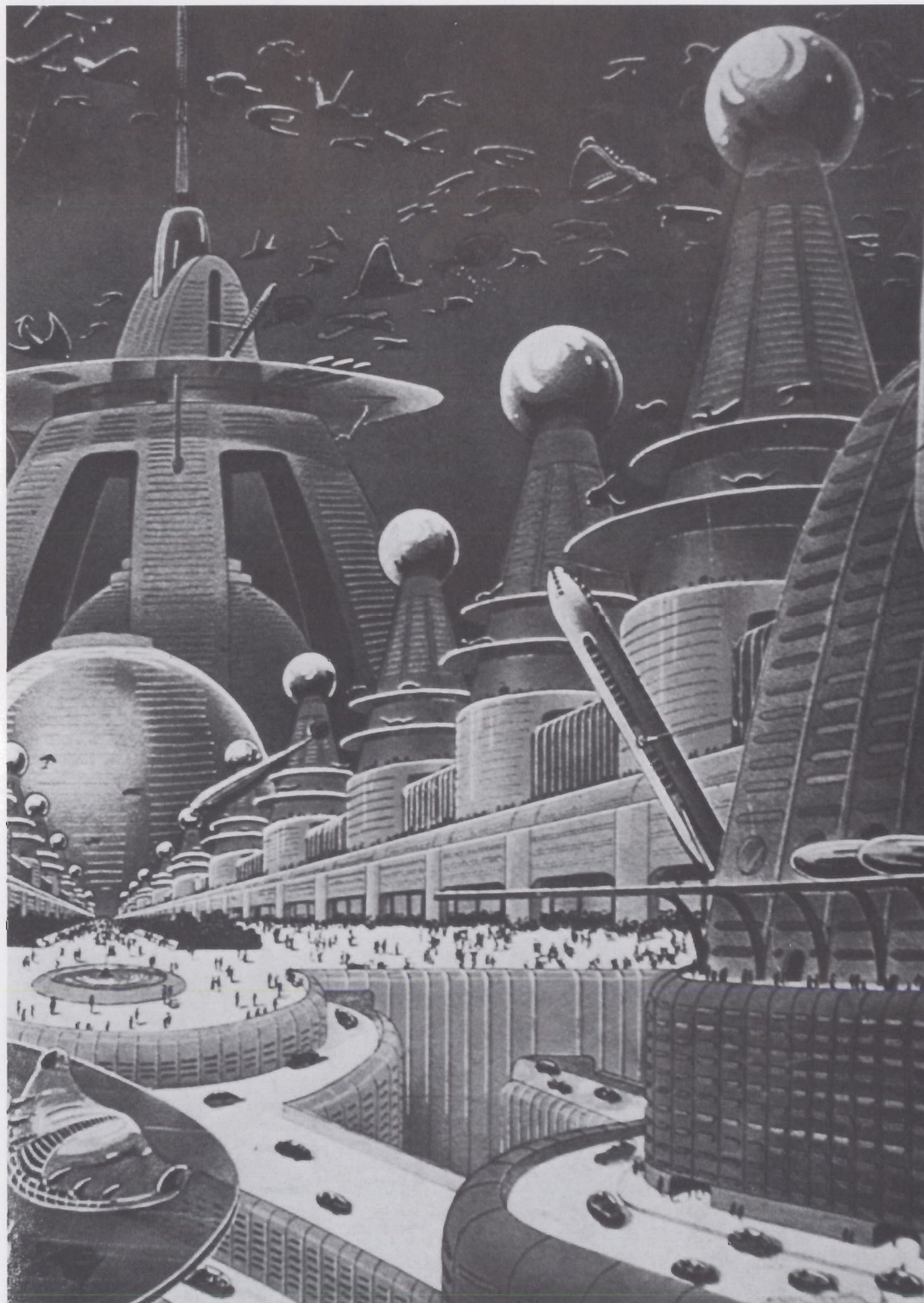
There are few things as risky and unpredictable as trying to see into the future. It's like trying to see through a murky window. Just page through some old Popular Science or pulp magazines of the 1940s to see what its writers had in store for the 1980s: Two planes in every garage, robot servants, skyscrapers a mile high and a world government, for example. However, some predictions do hit the mark. Submarines, lasers and space travel were all predicted well before their actual appearances. It's the possibilities of what might come true that make the predictions so much fun.

In that spirit, Insight convinced some local HP and Cupertino community people to put on their seer's caps and try to envision what tomorrow will bring. On the next few pages, join us in a journey that describes what some people think the future holds for the HP way, technology, the site, the office environment and the city of Cupertino.

We challenge you to file this publication away for 20 years. Then take it out in the year 2009 to see how accurate our armchair predictors and futurists are.

Let's talk again in 2009.

— Rob Youngberg



Predicting the future can be a hazardous affair as illustrated by this 1942 cover from the pulp magazine *Amazing Stories*. It doesn't seem likely that the next 10 years will bring this city of atomic power, science, space travel and unbreakable glass predicted for the year 2000.

THE FUTURE OF TECHNOLOGY: PERVASIVE, INTELLIGENT, FRIENDLIER AND ALMOST UNIMAGINABLE

■ The computer industry is undergoing fundamental change. Computing in the '90s will be very different from that of the '70s and '80s.

The emergence of cooperative computing (some call it client server computing) offers significant opportunity for those companies having the sharpest vision, technology and market focus. HP is very well positioned to capitalize on this new computer market. Our challenge is to execute the strategy that we have outlined. If we do so, HP can be THE computer company of the '90s.

"Profitability will also be a challenge in the computer industry of the '90s. Increased competition, the emergence of standards and multiple channels of distribution are some of the factors that will change the face of the industry. Our challenge is to have the lean structure and clear focus on profitability that will be necessary for success in the '90s.

"There will continue to be many opportunities in the computer industry of the '90s. A key challenge is to pick the right ones to pursue. Together with our outstanding technology, we need to hone in on the few areas where we have the competitive advantage to win. Focusing on specific applications and target industries will be critical to our success.

"Looking 20 years ahead, advancing technology will make a significant impact. Information technology will become pervasive in society. Advances in integrated circuit technology will put tremendous computational power on every desk and in every home. Significant advances in intuitive user interface and networking will put this power to use in ways that today we can hardly imagine. ■

— **Bill Murphy**
Director of Marketing
Networked Systems

■ Twenty years into the future I think we'll be thinking in terms of something I call BIPs versus what we're thinking of now: MIPS. By that I mean that we'll have far surpassed Millions of Instructions Per Second and maybe go on to Billions of Instructions Per Second.

"So we might be speaking in terms of 10 BIPS rather than, as we do today, talk about 10 MIPS.

"Computers will be everywhere... truly pervasive I think. They will all contain multiple processors. Daily life, thanks to computers, should be easier and simpler because of artificial intelligence breakthroughs. For example, I think real voice integration will be possible. We'll be able to interface with computers with our voices alone. We'll have high-speed networks and easy access to all types of information. This will all be invisible to the user. We'll request the information and it will come to us.

"Just as **Joel Birnbaum** has said, computers will be domesticated. We won't need to know how to run and program them and they'll be part of every aspect of life. For example I can see us being able to sit in our cars and not do much actual driving — the car will work automatically and steer us through traffic. ■

— **Wim Roelandts**
Vice president and
general manager,
Computer Systems
Group

■ Adding more fuel to the fires of change, electronics is also making inroads into completely alien territory. It's invading the postal service, for example, and will eventually (by the turn of the century) replace it. The mail will become postmanless; our mailboxes will be electronic and accessible from anywhere in the country. You will be able to send messages that seek out whomever you want them to reach — one person or hundreds at the same time. You'll choose to forward the mail in your own voice or in hard copy, controlling its time, place and mode of delivery.

"Changes in the instrument/computer interface will be even more profound. By the next century, fully computerized management of manufacturing will be a reality. And computer-aided R&D project management will have made inroads into many businesses through the use of artificial-intelligence systems. Even the planning of these computer systems will be computer-aided. ■

— **Egon E. Loebner**
HP Labs counselor for
science and technology

■ It is difficult to project twenty years, but I believe the rate of technological change will continue and computers will be pervasive in our lives and business. I hope some of the advances will help the geriatric crowd of HP retirees. ■

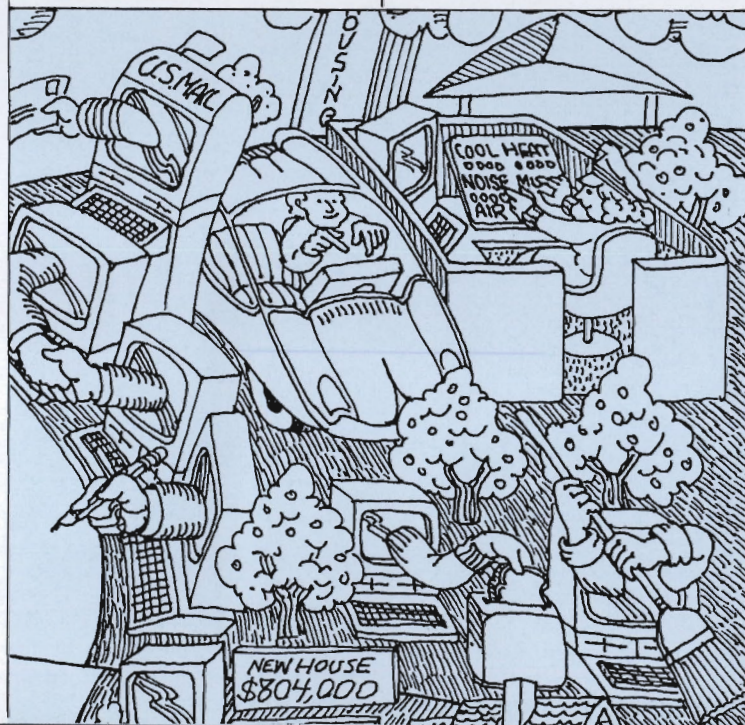
— **Dick Love**
General manager,
Computer Manufacturing Division

■ Artificial intelligence based applications will be commonplace in all market segments, greatly increasing the use of computers in our society. ■

— **Rich Sevcik**
General manager,
Commercial Systems
Division

■ No one can see 20 years ahead when it comes to technology, but certainly the trends in computing — ease of use, friendly, interactive, distributed, integrated, intelligent, pervasive network systems, power, bandwidth, high resolution, 3D, color, cost of ownership, etc. — will continue. ■

— **Dean Morton**
HP chief operating
officer



THE FUTURE OF THE SITE: SLOWER GROWTH AND RENOVATIONS

What's in the future for the Cupertino site? "One near-future change," says Cupertino Site Services Manager **Dick Rosemeier**, "will be increased direct billing. As opposed to allocating expenses — where the whole site absorbs costs — direct billing charges users for what they use." Telephone bills, for example, are currently allocated to the tune of \$1.5 million a year. Direct billing would promote 'ownership' of these phone bills and encourage people to manage this expense more closely.

Another change is slower growth. After 10 to 15 percent growth in the mid-eighties, culminating in 20 percent growth in 1988, the Cupertino site will say "Whoa!" **Don Stebbins**, facilities manager, predicts growth of 0 to 5 percent over the next few years. Will we stick to that? "It's a plan," says Don, with a chuckle, "and plans for space and growth around here tend to change..." Stay tuned.

Building refurbishments are also coming. Before HP breaks ground for a potential Building 45 in the lot

next to Building 44, you can expect some upgrades to existing structures. Buildings 40 and 41 will be renovated sometime around 1991. As space on site becomes available, Don and his facilities planners will have to make room for employees who will ultimately have to vacate Buildings 40 and 41. In the meantime, the Peppertree Cafeteria will remain office space through at least 1990 and HP has no plans to leave Building 46G before its lease expires in 1992.

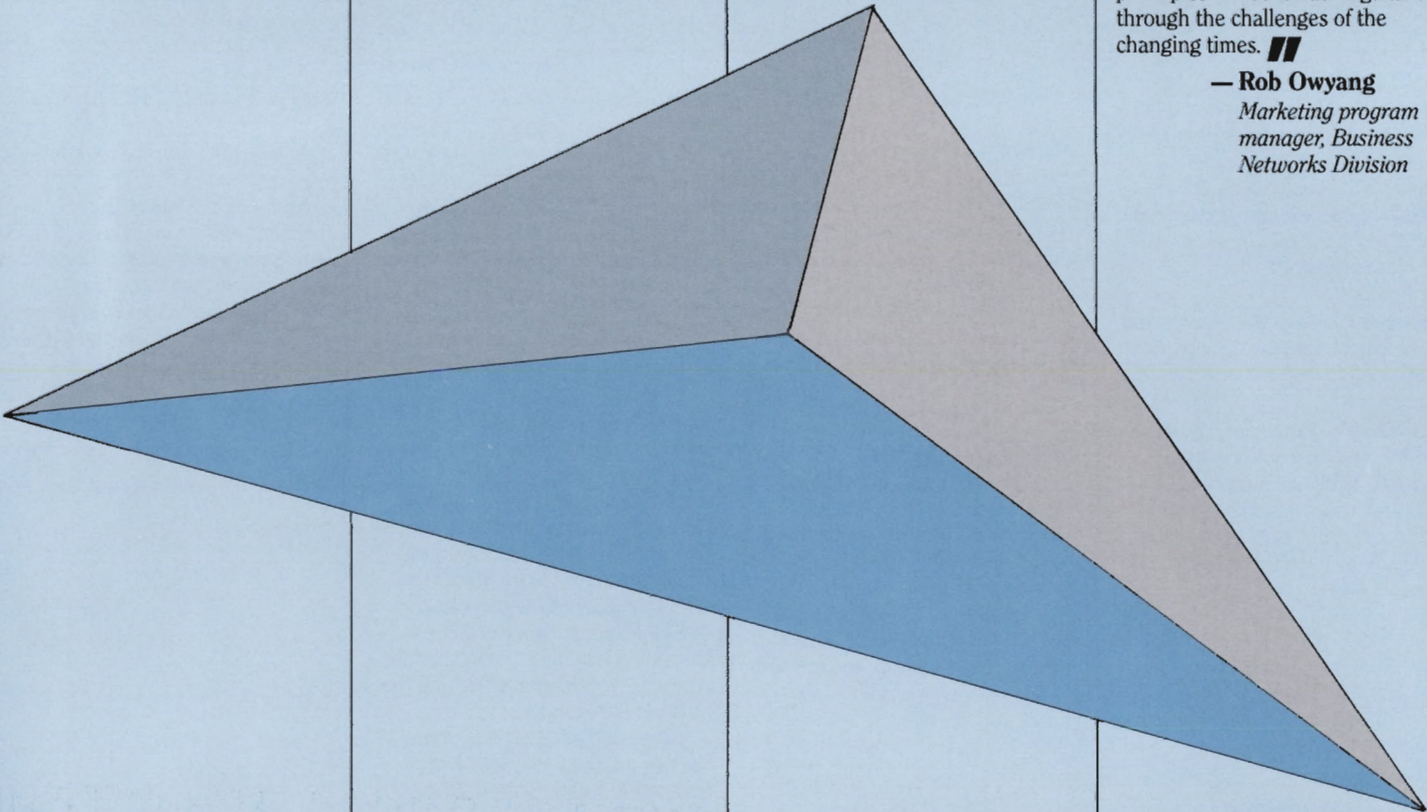
THE FUTURE OF THE HP WAY: WHATEVER WE WANT IT TO BE

/// The HP way has been changing since our beginning. Clearly we don't and can't always do business as was done in "the old days." Our customers, markets and society have changed and so must HP. We can, however, strive to maintain the same foundational values and objectives as did our early managers. These organizational basics can guide us in building our future strategies and practices. The HP way is more than just that which Bill and Dave did in the past — it's whatever we make it in the future. ///

— **Lisa Shuppe**
*HP way project
manager*

/// The HP way has demonstrated its longevity in the face of tremendous growth and change over the past fifty years. HP has grown into a large corporation making countless innovations which have contributed to the advancement of our society. I think the HP culture is based on fostering the entrepreneurial spirit — encouraging creativity, promoting risk-taking and empowering individuals and teams to make big contributions. I would like to see the HP way nurture the small company feeling and minimize the bureaucratic and organizational complexities typical of many large companies. As the next fifty years moves us into the 21st Century, I'm confident that our founders' principles will continue to guide us through the challenges of the changing times. ///

— **Rob Owyang**
*Marketing program
manager, Business
Networks Division*



THE FUTURE OFFICE ENVIRONMENT: CONTROL AT YOUR FINGERTIPS

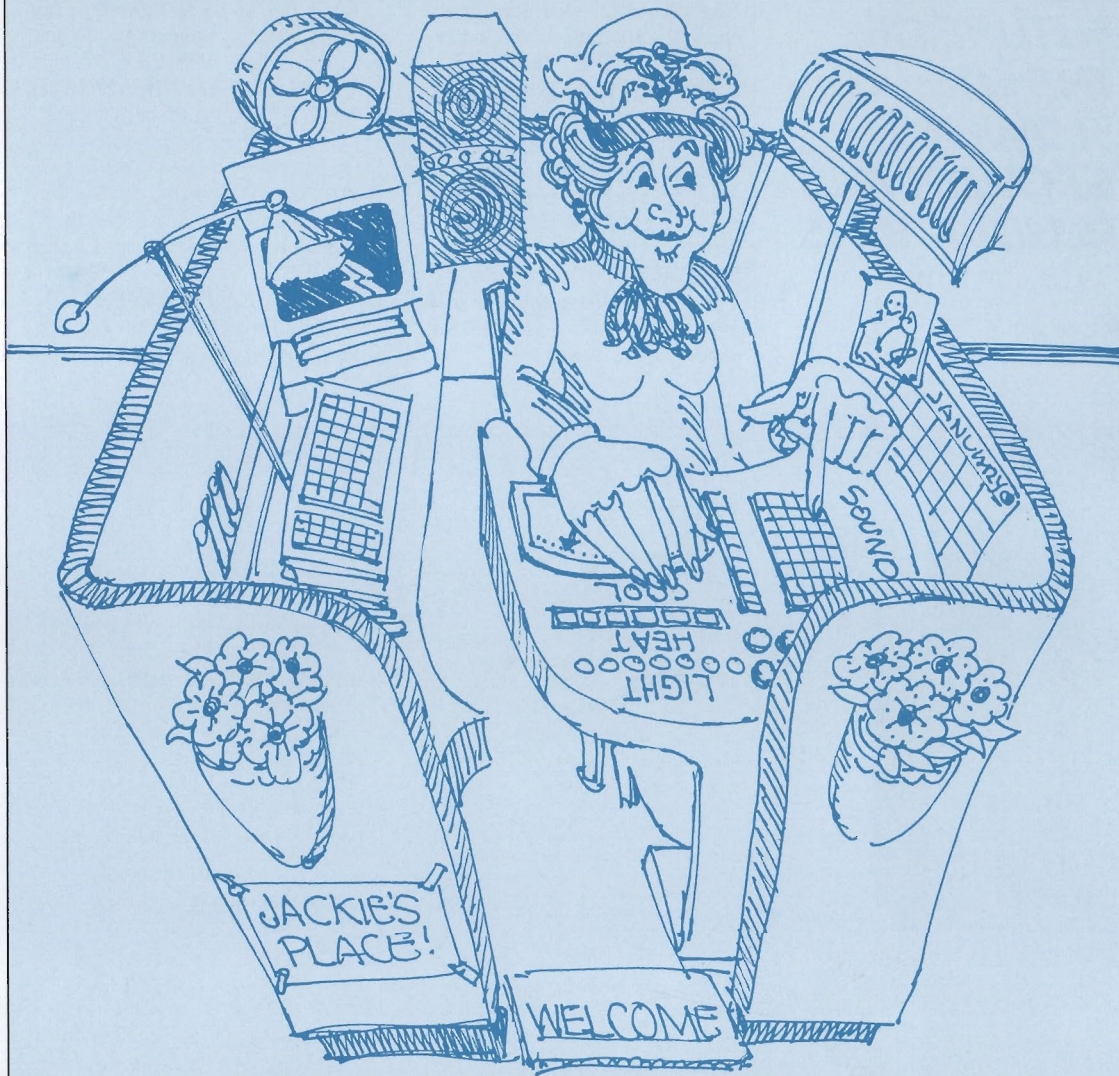
When it comes to environmental control, some of the most revolutionary advances have taken place in your automobile. Cold? Turn on the heat. Stuffy? Open the vent or turn on the air conditioning. Designers of office cubicles of the future have learned some lessons from automakers. Your cubicle will never get great mileage — city or highway — but you may one day be able to control the climate at your desk.

Controlling your office environment becomes more difficult when you consider the open office setup at HP. On any given day, points out facilities engineering supervisor **Steve Bernhart**, 30 percent of the employee population will be too hot with the “average temperature,” 30 percent will be too cold and only 40 percent will feel comfortable.

The solution, Steve explains, lies in bringing climate control down to the user level. Literally and figuratively. “With heaters, air conditioning, lights and air circulators dedicated to individual cubicles,” he explains, “cables and wires can be stowed beneath a raised floor, much like we have in our computer rooms.” This would eliminate the need for false ceilings which would mean, among other things, no falling tiles in the event of an earthquake.

Here are some of the features you could expect from an office of the future:

Lighting — Instead of lighting an entire floor, you would only need overhead lights at entrances and exits. Individual lights would allow you to select the most comfortable, non-glare positioning and lighting intensity for your own comfort.



Sound — Without physical walls to block out voices and office noises, you turn to what’s known as “white” or “pink” noise. These sound-masking devices emit a hiss similar to tuning in between stations on a radio. This already exists here at HP-Cupertino for entire floors. In the future, you may be able to control your own “pink noise.”

Heating — Localized radiant heat sources mean you control the warmth. If the person across the aisle from you is cold-blooded, you needn’t worry, your heater won’t get you steamed. Special heaters located below your desk warm your legs and feet, which sometimes is all you need to feel like you’re warm all over.

Cooling — Do you like working in a wind tunnel? So long as you’ve attained the paperless office, you can blast a fan that also provides fresh, filtered air into your own cubicle. Ducts and vents are all located beneath your desk and under the floor.

We’ve already seen the automation of office environment systems... innovations like ultra-sonic or infrared occupancy sensors. But this type of technology, Steve explains, merely detects changes in the environment and reacts to those changes. Steve looks forward to “smart systems” in the future that will anticipate inside conditions based on any number of factors, including humidity, the position of the sun outside your office and the outside temperature.

Some of this technology exists already, such as localized heating, cooling and lighting. Unfor-

tunately, the costs are prohibitive if you’re thinking about renovating existing offices today. Steve estimates it would cost roughly \$3,000 per cubicle to transform our offices from simple partitioned space to individualized office environments. That’s just the base sticker price for a cubicle of the future.

FUTURE OF THE CITY OF CUPERTINO: MORE URBAN, ETHNICALLY DIVERSE WITH MORE ELABORATE TRANSPORTA- TION SYSTEMS

/// The dynamic change in our area makes it impossible to predict what the future will be like. How many people in 1969 foresaw what 1989 would bring? What we try to do is create a blueprint for the future that can adapt to change. That's the key and the biggest challenge. We've identified trends that will affect Cupertino into the '90s. The population will continue to become more ethnically diverse and older. The city will become a little more urban, although we expect the population to stabilize at 45,000 people. The future issues will be growth, water, BART extension and light rail. ///

— **Robert Cowan**
*City of Cupertino
director of community
development*

/// Cupertino will continue to be home to high-tech companies in the future. Telecommuting will be an option for more workers. There will be a more elaborate transportation system for moving people to key points. The role of business in our school systems will continue to evolve and business will be more involved in the education of students. Whatever the future brings, Cupertino will remain a highly desirable place to live and a caring community. ///

— **Frank Strazzarino, Jr.**
*Executive director,
Cupertino Chamber of
Commerce*

/// In the next twenty years there will be added emphasis on people issues: the elderly, child care and open space, for example.

There will be a better working relationship between business and the community to help combat the problems of AIDS, the homeless and drugs. Businesses will be more involved in the schools, land use planning, child care and transportation. Social agencies will not be able to handle these crises alone and its going to take *all* the members of the community to solve them. There will be greater density in some industrial areas, but Cupertino's neighborhoods and parks will be preserved.

HP has always had an excellent reputation for community involvement and I'm confident that will continue. ///

— **Barbara Rodgers**
*Mayor of the City of
Cupertino*



The future direction of the city is becoming evident as Cupertino's skyline features some very modernistic architectural changes. This building is part of a new complex on the corner of Stevens Creek and DeAnza Boulevards. The city continues to wrestle with the question of appropriate rate of growth.

*S*easons change with the scenery
Weaving time in a tapestry
Won't you stop and remember me
...At any convenient time.


From the song:

"Hazy Shade of Winter"

by Paul Simon and Art Garfunkel

FOR THE PEOPLE
OF HEWLETT-PACKARD
IN CUPERTINO
Insight
NOVEMBER
DECEMBER
1999

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