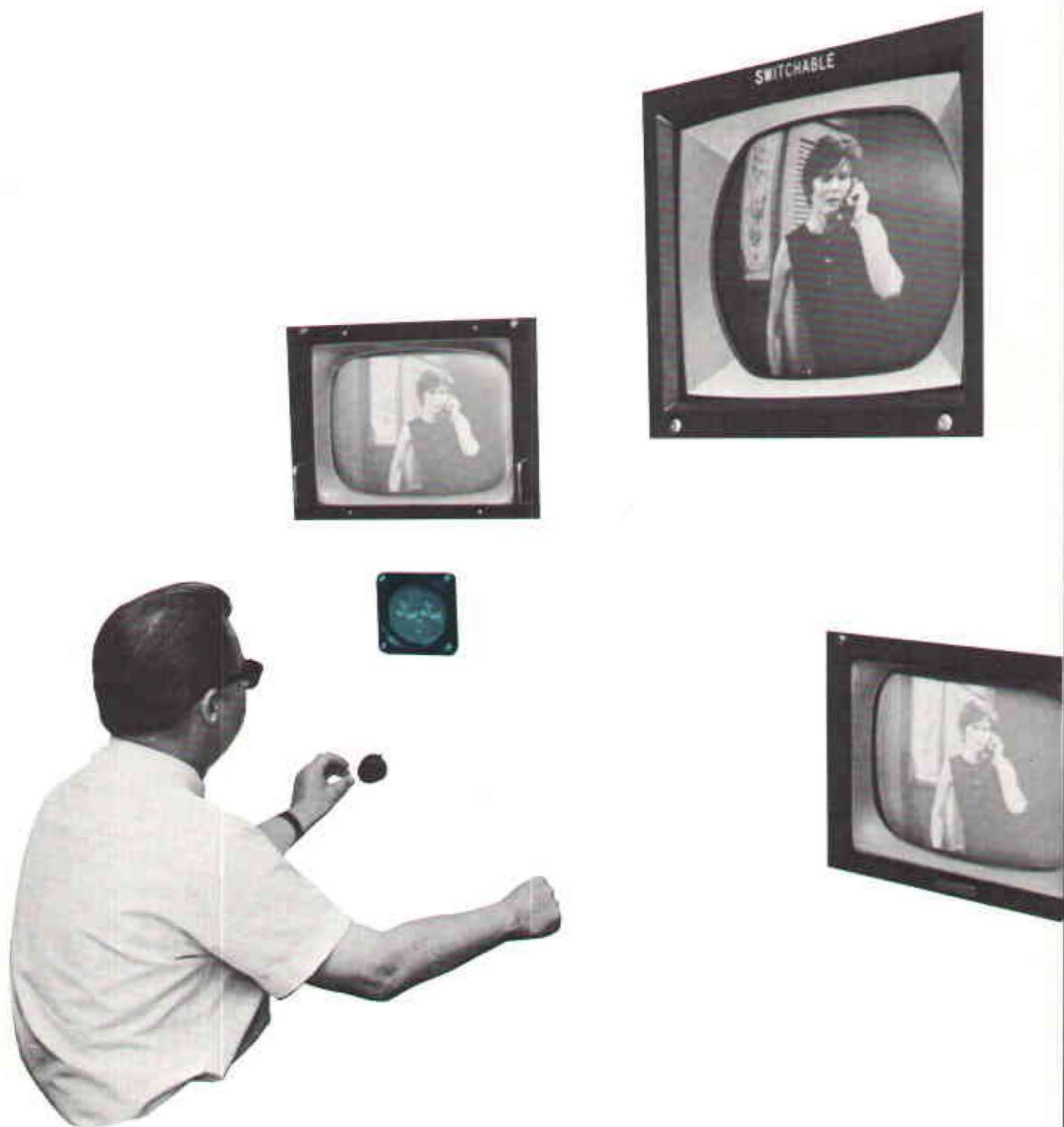
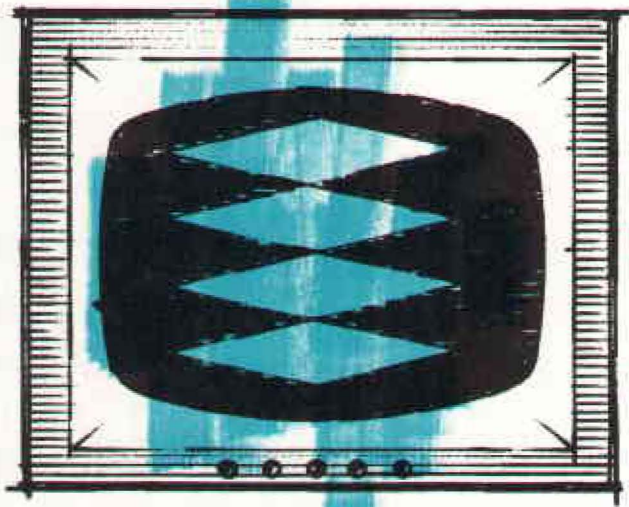


Measure

For the men and women of Hewlett-Packard/AUGUST 1968





Among major trends in big-time television is fast-growing use of shows that are taped or filmed weeks or months in advance of network release — such as Dean Martin show and Star Trek. Extensive use is made of HP equipment for test and monitoring at network facilities, local stations, and microwave relay points used in cross-country transmission of programs. Cover illustration is derived from photograph of central switching studio in NBC facilities.

Television: Miracle still in the making



Who was the first U.S. president to have appeared on television?

Wrong — unless you said Herbert Hoover. Date of his pioneering appearance was April 7, 1927, actually one year before he was to run for the presidency. Not only did it presage today's saturation of the airwaves by political contenders, but it represented the first public demonstration of television itself.

That Bell Labs show, using neon lamps connected to a sync wheel over hundreds of wires as the receiver rather than a cathode ray tube, was witnessed by a select handful of scientists, engineers, and press people gathered in New York.

Hoover recognized some of the importance of the day with these words: "It is a matter of just pride to have a part in this historic occasion. . ." But not even he, as Secretary of Commerce, could have foreseen the fantastic impact of television on this country 41 years later: more than 60-million people watching major news events; more than \$3-billion spent for national television advertising last year; TV in 95 percent of U. S. homes; international telecasts via satellite; full color telecasts; 24-hour-a-day programming; a national education television network; a boom in closed-

circuit television; portable TV; community antenna (CATV) systems serving remote areas; the split-screen image and the instant replay. With the possible exception of Marshall McLuhan, no scholar has yet come close to evaluating fully the changes being wrought by television on the life and times of both the United States and the world at large.

That early device of 1927 began to emerge from the laboratory cocoon in the thirties. The CRT came into use as a receiver. Cameras made use of the iconoscope. Experimental stations began to pop up. The British Broadcasting Corporation started regular television programming in 1936. In 1941 the present 525-line standard for the TV screen was adopted by the FCC, followed by the licensing of the first commercial stations.

In those early years television was very much a local business. Its programming amounted to video versions of local radio. Its chief power was in its curiosity value: anyone fortunate or brave enough to buy one of these big boxes with the little picture tube was guaranteed an unending supply of guests.

All of that began to change in 1947 with the advent of microwave communications. Here was an economical method of broadband, quality communications. With cross country relay towers separated in the order of 30 miles, and with no right-of-way problems, microwave offered the best vehicle for long-haul transmission. Network television wasted little time organizing itself and plugging in to the new microwave medium.

That same system, improved and extended to provide more than 80,000 route miles of common-carrier communications, is still the basic network by which you and your neighbors receive *Bonanza*, *Bewitched*, *Lost In Space*, and other eye bugglers.

Just how do they get onto *your* screen?

Start with a major network show. If it's news, documentary, guest or celebrity panel type show, the chances are good that it originates in New York, or possibly Washington, D.C. But if it is a big one-hour, star-studded studio show, a filmed show, or a five-a-week soap opera "strip," then it's more likely a Hollywood-Burbank production.

Very little of this production is aired "live." An NBC executive in Burbank described this for *MEASURE*: "We are pretty much a videotape network now. Six to eight years ago we used to send a show such as *Dinah Shore* live to the East and delay it here three hours. Now, just about everything possible is prerecorded."

It is not a simple process. Rowan and Martin's *Laugh-In*, for example, begins in a big Burbank studio — one of five — equipped with 96 microphones, almost 200 lights and half a dozen TV cameras. After the main sequences have been taped, the all-important process of editing begins. First, a 16 mm kinescope version is edited down to become a work print model for the master 35 mm magnetic tape. Every week *Laugh-In* editors splice in at least 250 pieces from a catalog of 3,000 strips of "wild shot" tape, a source of many of the show's brighter moments. Finally, video tape, splices, film portions, audio tape, billboards, dummy sequences allowing for the addition of commercials and station breaks, plus some "sweetening" with special sound

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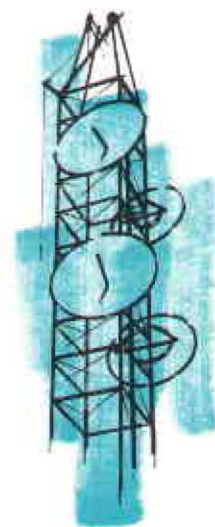
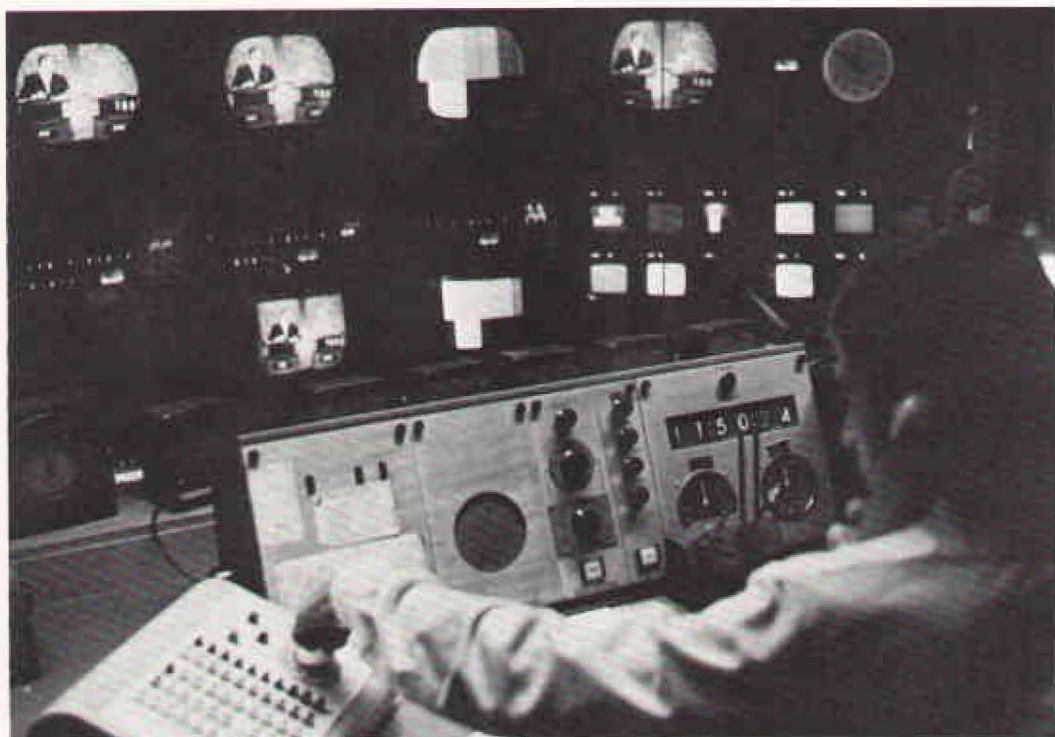
television

effects, are all brought together at a studio mixing console and put on a master tape. Actually, four copy tapes are made. Two are held in Burbank, two shipped to New York. At air time the extra 'B' tape is run simultaneously with the 'A' tape in case of any breakdown in the latter.

The show will be transmitted via a short stretch of coaxial cable to the local Bell Telephone outlet initiating long-line microwave communications. From New York it is relayed over what amounts to northern and southern segments of the network. Three hours later Burbank will release the show to the Western segment.

At various points along these network routes the microwave transmission will be continuously demodulated and monitored to check on quality. Technical quality, in fact, has reached such a level that an engineer in a switching central station in New York or Hollywood can detect almost no loss in fidelity even after a program has been relayed out and back around the entire network.

Test and quality-control instrumentation obviously plays a very large role in establishing and maintaining such broadcast standards. The networks, along with their hundreds of affiliated stations, as well as such supplier organizations as the telephone companies, utilize a wide range of HP equipment in this endeavor: microwave link analyzers,



Complexity of network broadcast operations is suggested by this view of central switching area. Major news shows such as elections can mean as many as 17 inputs to choose from—TV cameras, film changers, tape machines, and remote units. Rule of thumb for cost of network transmission between New York and Hollywood is \$1 per mile per hour.

multi-function meters, distortion analyzers, sweep oscillators, various coaxial and waveguide products, trouble-shooting cable fault locators, waveform oscilloscopes, as well as TV picture monitors and power supplies.

Change, fostered by technical innovation and competition within the industry, has been a way of life for television broadcasters. Recently they completed the big change-over to almost total full-color programming.

One network engineer, with 18 years in the business, foresees a number of other changes in the near future: more and more taped programming, more electronic editing, more solid-state design of equipment, more educational channels, more CATV, smaller monitors, and thin-tube monitors for "picture frame" wall mounting, as well as repeater screens that feed into various rooms from a central home receiver.

Another spokesman has the opinion that we've only scratched the surface as far as the use of satellites is concerned. "The problem today," he said, "is that the quality of satellite TV transmission is down about 25 percent compared to local broadcast quality. There's too much noise. This should improve with the use of more power and wider channels, but right now they're too busy with regular communications, particularly military.

"I should think that before long we can expect many more European and Asian pickups via satellite. Also more U. S. programming going to those areas?"

Many other possibilities for television are being suggested and discussed throughout the communications industry.

For one, there is the possibility of bringing in literally hundreds of TV channels into the home by various means, including waveguides and lasers as well as satellites and CATV cables.

There is, further, the prospect of creating what would amount to total television communications for every home. Integrated circuit technology, advancing toward still smaller and more complete and efficient systems, will make this possible. One writer believes it is probable that we will be able to link television and telephones to pocket-sized computers which will require little power to operate and will be low cost and virtually disposable.

Your television/telephone console then may be able to order up all manner and means of communications. It could bring you entertainment programs of every kind. If you were planning a trip, you would be able to dial for an instant TV display of information regarding transport and hotel reservations, the weather forecast for any point on your itinerary, best routing, and a rundown of the available activities in which you might be interested.

Or, the writer concludes, in that glorious, golden era of television you may be able to conduct most of your gainful activities without having to drive to an office or plant. Apparently you could just sit there — putting together plans or products according to information received on the telly, following a schedule published on the videonews printout, paying and getting paid according to a computerized credit system.

Good grief! Where's the OFF switch?

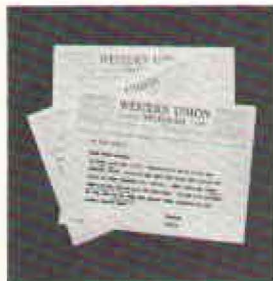
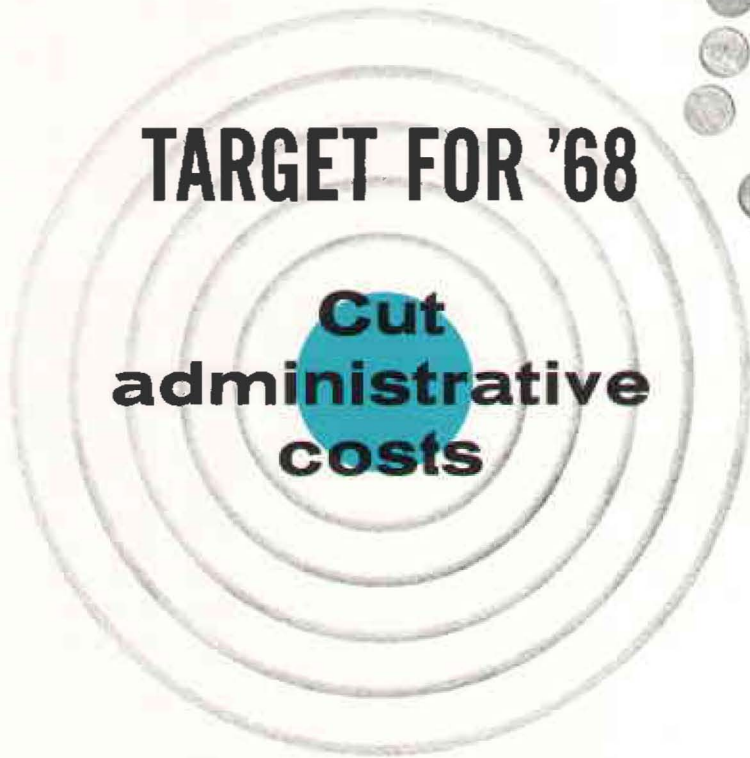


Television's technical capabilities were vastly expanded recently in conversion to almost complete color broadcasting. Above is latest in studio lighting control — hundreds of switches providing director with almost limitless variety and flexibility in lighting.



In these barn-like studio corridors may be stored the elements of today's "Today" show and tonight's "Tonight" show, and even some of yesterday's props. TV production activity at such Hollywood-Burbank and New York centers seldom ceases. As one show ends, crews move in rapidly to ready studio for next production.

The Law and



□ In his now-famed First Law, Cyril Northcote Parkinson stated that "Work expands to fill the time available for its completion." Corollaries of the law subsequently established that supplies and services consumed by an organization can also increase in volume and cost regardless of the amount of work actually turned out. In fact, said the British professor of history, such trends will occur even

and to reduce those rambling conversations about the weather, etc., etc.

Wordiness in TWXing and cables also is costly. In an experiment, a 68-word sample cable typical of many that are composed in haste was reduced to 24 words without loss of meaning. The famous "ASAP" ("as soon as possible") was changed to "soonest" because the abbreviation counts as four words, each costing between 21 and 34 cents. It's easy to see that a few moments spent editing excess verbiage, including greetings and farewells, could save quite a few dollars per cable.

Batching of TWX messages to achieve the one-minute minimum charge is another communication economy. So, obviously, is a decision not to use air mail when there really is no rush. A recent survey by the administrative services group showed almost a 75 percent chance that first-class mail will arrive the same day as air delivery. The survey also showed that a lot of printed matter was being mailed air mail rather than via the far lower "air printed matter."

There is, of course, one further question that can be asked concerning any communication: namely, whether to communicate at all. It is the opinion of many that a substantial number of letters and phone calls lack real urgency, and their thoughts could well be put in cheaper memo form or held off for a later contact.

Take a look now inside some typical desk drawers. Chances are that several of them will be overflowing with stationery, pencils, staples, paper clips, etc. Such stockpiling has a multiple effect on costs. First, it represents materials that will be held idle and unproductive for months to come, far more than the two months supply generally recommended. The company then has to replenish those supplies to satisfy the needs of other people. The cost of doing this naturally reduces the cash available to the company for investment in more active and profitable areas.

The same redundancy and waste can occur in maintaining files and records. To help halt this, a new records retention schedule soon will be distributed throughout the company. However, the experts say that where general correspondence is concerned, the solution is up to the individual. Most such communications, they believe, are out of date well within six months. These should be dumped before they accumulate and add to the spiraling demand for more files and more space.

There are other, positive efforts than can be made to cut costs. These include seeking out certain of the diversified services within the company before arbitrarily going to an outside supplier. Included are typesetting and printing services available in several company locations for such work as product data sheets and technical publications. Such services are more than satisfactory for many requirements, as well as less expensive.

Basically, improvements in handling the items outlined so briefly here are matters of housekeeping. With a rate of expenditures somewhat lower than industry average, HP comes off as a good housekeeper. Still, it follows from Parkinson's law that there is always plenty of opportunity to reduce costs. Every dollar saved is a contribution to profits — and employee profit sharing. □

the Profits...

when output is decreasing, particularly within public organizations.

Although something of a humorist, Parkinson was serious and scholarly in his description of the workings of his law. With impressive evidence based on British Admiralty statistics, he showed how bureaucratic departments build and grow with an impetus of their own. In spite of 67 percent reduction in battleships in commission, in a 14-year period naval dockyard workers increased by 9 percent, dockyard officials rose by 40 percent, and admiralty officials increased some 78 percent.

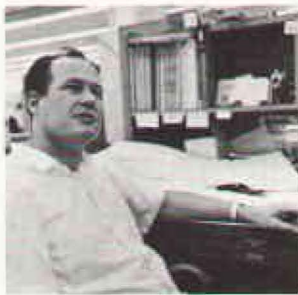
The good professor had no solutions to offer: "It is not the business of the botanist to eradicate the weeds. Enough for him if he can tell us just how fast they grow." However, there *are* ways of attacking those weeds. As MEASURE found out — in discussing the problem with people concerned with the administration of such areas as mail, telephones, office supplies and furnishings, and various printing and reproduction services — there are countless opportunities for large and small savings in the everyday activities of many employees. And since there is a wide choice in services and supplies made available to HP employees, it is up to the individual to be selective, and to make decisions with due regard for cost as well as convenience. Significant savings can result.

It was pointed out, for example, that if phone calls (which average now in the neighborhood of 10 to 11 minutes each) could be reduced by one minute, the company-wide saving would amount to almost \$200,000 a year. The solution, say the experts, is to organize thoughts in advance





Wish you v



John Gliever, F&T engineer, thinks five years on a schooner trip around the world is the ideal vacation. He'd settle also for a bicycle tour of Europe. Either way, meeting people is most important.

Green countryside, inns that are small and cozy, rustic and independent people, food fresh off the farm, and music that springs from the land make up the vacation goal of Loveland's Pat Truesdell. Ireland, she says, is where she expects to find them.



An ideal vacation to Andy Sweeney of Rockaway Division is one that does not follow a rigidly planned schedule. Too many people, he says, return from such vacations completely exhausted and miss the whole idea.

□ Ever since the invention of the weekend, somewhere back about 4000 B.C., people have had to face a difficult decision: What to do with their time off?

Now, thanks to the paid vacation, jets, and the pay-later plan, that decision is even more crisis-ridden — a thousand places to go, a hundred ways to get there, scores of things to do. How can you possibly choose among all that?

Well, there is a partial solution, and that is first to decide what *kind* of vacation you wish. Forget for the moment the questions of where, and how, and when. Concentrate on the style of holidaying you most desire: Laze it up — or live it up? Commune with people — or fish? Be served hand and foot — or do everything yourself? Make it a physical challenge — or an intellectual adventure?

With that approach in mind, MEASURE asked its contributing editors to seek out employees with interesting vacation ideas, plans and experiences to contribute, with results as follows:

"Every three years," wrote Bernie Lizenby of Microwave, "I can't stand my rut so I go do the wildest thing I can think of. Three years ago I got on a plane to Tokyo. From Yokohama I took a train for 13 hours to a little village in Southern Japan. Here I lived for a month . . . in the middle of a rice paddy."

Contrast is a highly prized vacation ingredient. June Philip of South Queensferry put it this way: "The gentle pace of Edinburgh as it glides sedately through a wet, misty spring into an undecided summer can be pleasant and relaxing — or can drive one suddenly to frantic case-packing



ere there?

and a one-hour flight to London . . . where pubs beam warmly, cinemas flash signs, street markets crackle with cockney wit . . . everywhere movement, noise, colours, concerts, plays, a browse, a drink . . . rushing, pushing, exciting . . . for a short time."

Clem Mercier of Waltham takes the other tack — north to the deepest woods he can find in the Canadian wilderness. There it's fishing and hiking, hiking and fishing, followed by more fishing and hiking.

New faces, new places and a sea voyage was the combination ordered up recently by Stan Barski. At HPA they say he is still bemused by memories of the people he met on the liner *Princess Italia* as it cruised down the west coast of Mexico.

Vacations can also serve "to really know each other and enjoy the simple everyday things" according to Doris McCorkle of the Richardson, Texas, sales office. "There's not much I can do about the faster pace of living today. But I would like our family's curriculum to come to a halt for just a week or two out of the year — for a get together and a real old-fashioned Christmas or Thanksgiving."

Based on MEASURE's sampling, the number of HP people opting for travel and sightseeing would fill several ocean liners, not to mention a considerable fleet of chartered jets.

Bill Beierwaltes of Loveland would like to rent a 50-foot yawl and cruise: "The trip itself, not the destination, would be important to me, as long as there was adventure and variety . . . freedom from schedules, closeness to nature."

(continued)

Maridel Jordan, Public Relations illustrator, is the kind who puts "STAMP OUT SUMMER" stickers on her bumper. Bitten by the ski bug two years ago, she figures the ideal vacation would be an endless winter in the Alps.



High in the mountains and alongside a stream, Clint Gehring of Loveland Division would pitch the family tent and then just laze around taking in the rocks and the colors and flora — maybe even a few fish.

Read between the lines of the vacation report by South Queensferry's June Philip and it's clear she has a liking for swinging London — "rushing, pushing, exciting . . . for a short time."



the ideal vacation

Vacation plans for Barbara Amsden Grady of corporate Marketing have just got to include lots of golf or skiing. Recently married, she even met her husband at a golf course.



Just step into the motor home that Emma Whitehead of Rockaway considers ideal for whisking one away on the ideal vacation: hardly any advance preparations needed, comfort and convenience all the way.

Is cruising among tropic islands on a 50-foot yawl an impossible dream? Not if you are a young, single marketing engineer such as Loveland's Bill Beierwaltes. Says Bill: "I'd spend my time sailing and exploring coves and beaches."



These two enterprising F&T lasses, Gladys Kinney (left) and Barbara Guentner, have hopes of leading a whole troupe of adventurers through the South Pacific. "That's the great place," says Barbara, "and 1969 is the year."

Just to leave for a vacation without being exhausted by its preparations is the first requirement of Rockaway's Emma Whitehead. As a solution she endorses the use of house trailers. Her "Winnebago" has taken the Whiteheads on many a scenic cruise of North America.

A boat trip, preferably to an island retreat, was the choice of many land-bound members of the HP organization, particularly people in the Midwest Sales offices. The Skokie office vote on this yielded Len Johnson, Sandy Brunke, Sharon Waldo, Janice Johnson, Camille Hudma, and Ron Rosen.

Charles Fortune of Rockaway has different ideas: "On reflecting back to one of the best vacations I ever had, I found that it really had nothing to do with time and money. I think it is entirely dependent on a state of mind. However, letting the question of the ideal vacation appeal to my unaccomplished dreams, I have always had a yen to take a steam-paddle trip up the Mississippi, spend a week or two at the King Ranch in Texas, a helicopter flight over the Grand Canyon, and a few languid weeks in one of those small Mexican villages on the Pacific Ocean — off the beaten track!"

Quite a few people want anything but adventure and excitement, and only a minimum of activity. The ideal for Loveland's Clint Gebring is to take his family into the mountains. "We'd put our tent up in some remote mountain valley with maybe a little stream nearby and wouldn't leave for a week. I'd like to leave that spot knowing everything I can about it — the color and shape of the rocks, the different plants and trees!"

In the same vein, Rockaway's Andy Sweeney wants his vacations completely divorced from a planned schedule. He envisions a small village in Austria or Switzerland, a slow-paced country inn, and leisurely walks to no place in particular.

On the other hand there are those whose vacation ideal is sport and more sport. For them, paradise is a light coating of powder snow over a deep-packed base — or 36 holes of golf a day. Barbara Amsden Grady of corporate Marketing is one such fan. As a matter of fact, she first met her husband, Dick, a low handicapper, on a golf course near Palm Springs. Loveland's Pete Montoya has the same kind of fixation about water sports, and dreams of Hawaii's surf as the ultimate challenge. Boating also has many devotees. John Gliever, F&T Labs, operates three small vessels mostly in racing and family-style cruising. *His* dream, though, is "a five-year cruise around the world in a schooner, spending enough time in each port to become somewhat of a native!"

Well, a certain degree of fantasy seems inevitable in discussing the ideal vacation. MEASURE has published these views in good faith and with absolutely no guarantee whatsoever. However, this report would not be complete unless it presented what must be the all-time high in wishful thinking, specifically that of a Microwave Division engineer — single, creative and anonymous: "To have an ideal vacation I need a girl who knows *when* to listen, *what* to say, *where* to be . . . and not to worry *why* we live.

"The rest is irrelevant!"



Lead girl

the essentials are a liking for people, a sense of responsibility, and the ability to put in a very busy day — mostly on your feet . . .

Forget about corporals and squad leaders. Probably the only thing an HP lead girl has in common with military style leadership is that she, too, is a leader of people. But, as in the case of Mary Di Matteo, lead girl in Waltham Division's wiring section, the production line leading is done chiefly through example, encouragement and experience.

Mary, who recently completed her fourteenth year in the Waltham manufacturing group, describes her job as setting up the work on a day-to-day basis for her 30 wiring girls and keeping them supplied with the necessary materials and information to do the job.

A typical day for Mary, or other lead girls throughout the company, may start with a "Gantt" production chart. This tells exactly what work is in progress and what new jobs are due to start that day as well as during the weeks ahead. With that information she can decide how the new work is to be distributed.

Mary, a Scottish lass married to a machine tender, was born practically within hailing distance of Waltham. She got her start in the electronics industry as a clerk with the Submarine Signal Company of Boston, a manufacturer of sonar devices. She came to Waltham as a clerical worker, but moved to the line because she thought the opportunities were greater there for variety in work and for working with people. Four years ago she was given the lead girl responsibility.

Mary Di Matteo keeps in mind the personality and capability differences of the people in her section. Some of them thrive on change while others would rather stay with the jobs they know best.



"It's great what can be accomplished by encouragement," Mary says. "When people take on new types of work they often worry about it — whether they will make the grade or not. My job is to work with them, give them samples and prints of the work to go by — and just generally encourage them.

"You know the girls here have a real sense of accomplishment — the way they follow the quality chart and the work chart. It means something to all of us when the quality is up."

As can be seen in the following photo story, Mary Di Matteo's day is filled with variety — people, schedules, products.

It's clear on seeing her in action that she takes real pleasure in her work — and that her co-workers enjoy the quiet, low-key manner that helps the day go by smoothly and more effectively.

(continued)



Production change orders can mean a whole series of steps to be taken at the line level. As lead girl or line leader, Mary Di Matteo must follow through to insure that people on the line have the information. Here Mary discusses change involving switches with Erika Liepkalns.

lead girl

When production scheduling changes occur, it's Mary Di Matteo's job to see that people in her area are thoroughly briefed and set up for the new work. Here she pulls a print of the new job from file to serve as a guide to the wirers.



Comes the coffee break and Mary Di Matteo is ready to rest her feet while the line people who normally sit prefer to stretch. Enjoying the respite with Mary are, from left: Margaret Pitts, Penny Moran, Eleanore Dobbins, and Mary Cherry.



The stockroom is a frequent stop on Mary Di Matteo's daily rounds. Here she will take out the items needed to keep the 30 people in her wiring section supplied at all times. Her 14 years at the Waltham plant have given Mary a very thorough background in the division's product lines and manufacturing techniques.



Samples of new jobs are important in setting up for a new run. Although HP lead girls or line leaders do work informally with the divisional "house mothers" and do take a personal interest in the people of their section, their basic responsibility is keeping section's production moving on schedule.



Days often start or end for Mary Di Matteo with a review of the Gantt chart, which describes production progress and future scheduling. Here she confers with her line supervisor, Fred Morris. Their main concerns at such meetings are new jobs due to start and possible shortages of parts.

News in brief

Palo Alto — Edmund W. Littlefield, president of Utah Construction & Mining Co., San Francisco, has been elected to the HP board of directors. Littlefield, 54, is also chairman and a director of UCM's affiliate, Marcona Corporation, and its subsidiaries. With his appointment, the HP board now has 15 members.

Los Angeles — A variety of new HP products will be introduced here at the 1968 Wescon — Western Electronic Show and Convention, August 20–23. Two HP products are among 20 selected from among 176 entries for the Industrial Design Award Exhibition at the show. These are Microwave's 11600A transistor fixture, and Palo Alto Division's 2760A optical mark reader. Both are eligible for the special Pacesetter award or an award of excellence. Wescon is expected to draw some 50,000 professional visitors to exhibits at Hollywood Park and Los Angeles Sports Arena, and 32 technical sessions at the Biltmore Hotel.

Palo Alto — George Newman, formerly director and adviser to YHP Managing Director Mori Katakami,

has been named to the new position of administrative manager, International Operations, Palo Alto. Elected to succeed Newman in the YHP post is John Lark, formerly precision components manager at the Loveland Division.

Mountain View — Alan Simpkins resigned as the Delcon Division general manager effective July 1 in order to devote full time to several outside interests. Gordon Eding has been selected to serve as Delcon's general manager in addition to his responsibilities as general manager of the Mountain View Division.

Palo Alto — The Palo Alto Division has divided its marketing and engineering programs into two disciplines — instruments and instrument systems under Jerry Carlson and data products under Tom Perkins. Effective July 1, the separation represents an initial step toward the formation of two divisions anticipated for 1970. Present areas of manufacturing, finance, product assurance, and personnel will continue to serve both disciplines.

Palo Alto — A regular semiannual dividend on the company's common stock was declared by the HP board of directors at its meeting July 18. The 10-cents-a-share dividend is payable October 15 to shareowners of record October 1.

Glen Iris, Victoria, Australia — Continuing a busy season of exhibitions, Hewlett-Packard Australia will demonstrate a broad range of instrumentation at the New Zealand National Electronics Conference in Auckland, August 20–23, and at the Brisbane IREE conference, August 22–23. Private exhibitions held recently include medical products at Adelaide and Perth in June, electronic products in Perth July 1–5, and computer and systems showings in Melbourne, Sydney and Adelaide July 14–28.

Palo Alto — Purchase of company stock for the second quarter of fiscal 1968 under the employee stock purchase plan was made at a price of \$81.64 per share. Cost to participating employees is \$61.23, with the company contributing \$20.41.

People on the move

Avondale — Jim Schlater, to international coordinator, from chemical products manager, HPSA.

F&T — Tom Andrew, to engineering staff, from tool engineering, Microwave; Larry Johnson, to materials engineering, from Microwave; Harry Wood, to industrial engineering, from corporate process engineering.

HP Systems — Bart Kingham, to engineering staff, from instrument systems, Palo Alto Division.

International — Alan Bickell, to finance manager, HP Ltd., South Queensferry, from HP Australia Pty. Ltd.; Bob Bridge, to co-marketing manager, manufacturing division, Hachioji-shi, Japan, from corporate product training; Ray King, to manufacturing manager, HP Ltd., South Queensferry, from tooling manager, Loveland; Dick Love, to commercial services manager (West), Palo Alto International Operations, from commercial services manager (East), Paramus; Lee Seligson, to personnel manager, International Op-

erations (Palo Alto), from South Queensferry.

Loveland — Ken Howell, to marketing staff (calculator sales), from corporate process engineering; Jack Murata, to supervisor production area, from manufacturing supervisor, YHP; John Penrose, to finance staff, from finance manager, HP Ltd., South Queensferry.

Microwave — Don Connelly, to environmental test engineering, from Customer Service Center (repair); Jim Haynes, to circuit lab, from tool engineering; Doug Scribner, to quality assurance manager, from production engineering (signal analyzers).

Mountain View — Frank Berry, to R&D staff, from F&T Division.

Paeco — Glenn Affleck, to printed circuit section manager, from corporate process engineering; Don Braman, to materials manager, from manufacturing supervisor; John Jenke, to cost accounting, from materials manager;

Bob Perricone, to manufacturing supervisor, from corporate process engineering.

Eastern Sales — John Chiarella, to account manager, from senior field engineer, Norwalk; Lee Frank, to field engineer/computers, from staff engineer, Cherry Hill; Bob Glina, to sales rep/chemical instrumentation, from staff engineer/chemical, Lexington; Bob Hinman, to field engineer, from staff engineer, Norwalk; Bill Molenkamp, to service rep/medical instrumentation, Lexington, from electronic technician, Waltham Division; Thomas Richey, to staff engineer, from district service manager, Cherry Hill; Howard Volin, to sales rep/chemical instrumentation, Cherry Hill, from staff engineer, West Conshohocken.

Midwest Sales — Don Skierka, to supervisor, shipping-receiving and parts area, from assistant supervisor; Ed Zygowica, to order processing staff, from supervisor, shipping-receiving and parts area, Skokie.



from the chairman's desk

National political activity accelerates this month with the staging of the two major conventions in Miami and Chicago. Whether or not you agree with the convention system of pre-selecting political party candidates, these affairs serve to heighten interest in presidential contenders and national issues and, hopefully, generate interest in the local candidates and issues that we will also find on the ballot in November.

With each passing election the problems faced by our nation grow in number and complexity, and it becomes increasingly important that each of us be as informed as possible about the candidates and issues at all levels of government.

Across the country, there are 34 Senate seats to be decided, all 435 seats in the House to be filled, and 21 governors to be elected. In addition, there will be a multitude of people chosen to fill other state, regional, and local offices, along with many local issues requiring thoughtful consideration.

The men and women we elect will have to cope with, and find solutions for, many problems. They will be concerned with Vietnam and other overseas commitments, with problems of the minorities, with taxes, with urban problems, health, education, transportation, and housing, to name just a few.

There is hardly an area where the government has not become involved. Its influence deeply affects you, your family, your community, your company, and your country. In 1947, for example, the combined budgets of all levels of government amounted to approximately \$44-billion. By 1967 this had increased to well over \$200-billion. In 1947 one out of every 12 workers was a government employee. By 1967 it was one out of every six. Today, more than 20 percent of all economic activity in the United States is accounted for by the federal, state, and local governments, so there can be no question about the impact of government on the economic life of the nation.

In view of this, we can hardly afford to turn our backs on the responsibilities we face as voters. We cannot expect government to be responsive to our needs and desires unless we participate in the selection of the individuals who will lead it.

Many Hewlett-Packard people are actively working in support of particular candidates and issues. Many others may not wish to become personally involved. But, regardless of the extent of participation, I strongly urge each of you to make every effort to be registered, to be knowledgeable, and to vote. Only by doing this can you hope to contribute to a more effective, responsive government for all Americans.

David Packard

