

The early years

Measure

For the men and women of Hewlett-Packard/DECEMBER 1971



“Those were the days,



my friend”

The history of Hewlett-Packard is a living history—and a lively one. The photos above, for example, are right out of its early days. Yet the people—as far as is known—are still rather light on their feet. The girls, Gerry Brand (left) and Lois Mendenhall helped entertain fellow HP employees at Harmony Plotter outings, circa 1943. As it happened, Gerry later married the chap dancing with the dazzling Spanish lady above at an early WEMA meeting.

The chap is Bill Wolfenbarger who today is still an important member of the Microwave manufacturing team. And enjoying every minute of it, he says. In this spirit, MEASURE turns back the pages of *Watt's Current*, the company's first employee magazine, for another look through photos and excerpts at some of the people and the events that had a hand in the shaping of the company as we know it now:

Excerpted from special historical issues of *Watt's Current*, February 13, 1948, and November 7, 1954:

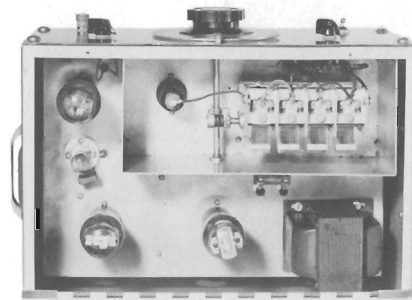
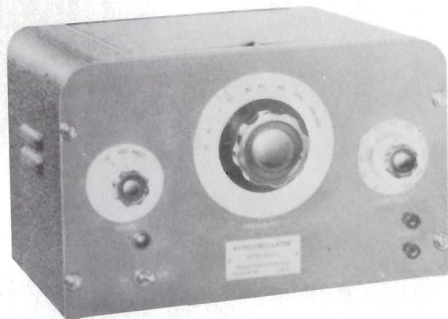
□ “In the beginning . . . there were two Stanford students. Their names were Bill Hewlett and Dave Packard. The time was 1934, and these two young electrical engineers were about to take their A.B. degrees and step into a business world that was far from eager to receive any more young men looking for work.

“The two undergraduates laid their ideas before Frederick Terman, Stanford's world-famous dean of Electrical Engineering. Dean Terman told them of the advisability of obtaining additional experience and furthering their knowledge before they tangled with the business world.

“This they did. Dave Packard went into the vacuum tube research department of General Electric at Schenectady. Bill Hewlett spent a year doing graduate work at Stanford; went to Massachusetts Institute of Technology and then returned to Stanford to do some practical research and prepare for his degree in Electrical Engineering. By now Packard had also returned to the Palo Alto campus on a research fellowship.

“Deciding the time was ripe, Dave, then a married man,
(continued)

Here's the first HP electronic test instrument, the Model 200A resistance capacity audio oscillator. It established new performance and value standards for this basic type of laboratory equipment. At last report, several of these instruments were still in operation.



Founders Bill Hewlett (left) and Dave Packard first met as electrical engineering students at Stanford in 1934. The idea of owning and operating their own business appealed to both. Ideas were their chief assets when some five years later they launched their business. The enterprising spirit of that event is still seen whenever a product development team springs up around a new idea at HP.



Having outgrown the garage seen on the cover, in 1941 the partners moved to larger quarters in South Palo Alto—previously know as Tinker Bell's and now as Polly and Jake's Antiques. There, from left, worked Glenn Zieber, Al Spear, John Terry, and Harvey Zieber. But, war soon accelerated demands beyond the capacity of this rented facility, so in 1942 HP completed its own building. Known as the Redwood Building, it's still in active service with Automatic Measurement Division.



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rented a three-room apartment in a large brown shingled house at 367 Addison Avenue, in Palo Alto, and Bill moved into a 12' x 18' garden 'cottage' in the rear. Next to the cottage was a one-car garage which Dave and Bill decided was to be their experimental workshop. Installing several benches and shelves in the garage, they soon went to work.

"On a spare-time basis (both men were still in school), the two informal partners began building various devices which were about 50 percent experimental and 50 percent for income. They developed a diathermy machine which the Palo Alto Clinic bought—this was the first HP product ever sold. They assembled a thyatron drive to permit accurate setting of a telescope for Lick Observatory. Some other innovations included an electronic device for tuning harmonicas, air-conditioning controls, a foul-indicator for bowling alleys, and a reducing machine which worked by applying an electric shock to the offending areas.

"Simultaneously, Bill Hewlett was finishing his E.E. thesis on the resistance tuned oscillator. From all information at hand, it looked as if this instrument would maintain better stability, cover a greater frequency range and have less distortion than any other oscillator heretofore marketed. Further, it looked like the oscillator could be assembled of inexpensive parts, quickly and easily since one of its prime features was simplicity.

"So, the first HP oscillator was built in the little garage behind the brown-shingled home. Perhaps 'assembled' is a better word—all the parts were standard. The first 'HP grey' paint job was baked onto the finished cabinet in the Packard kitchen stove.

"The first instrument, and then several others, were sold to friends in electronics by the simple expedient of

(continued)



Responding to a newspaper ad for wartime help, women flocked to HP for production-line jobs. Among them was pretty Pat Thom who became the *Watt's Current* correspondent for the assembly area. By war's end, of course, women had found a permanent place in the electronics industry.

Office scene in 1948 shows, from left, Jack Olney, general accountant now with Mountain View; accounting assistant Jessimine Bierbaum; Elaine Cook, secretary to office manager Frank Cavier, now vice president and secretary; and Earle Rother, payroll accountant. Says Cookie, who has served continuously as Frank's secretary since 1947: "I never dreamed I would stay so long—or that the company would become worldwide."



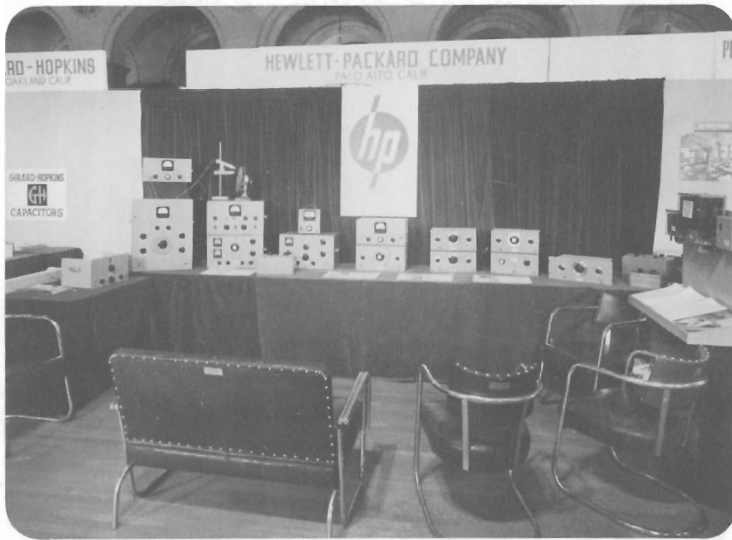


Product assembly in the 1945–46 era was a stand-up business. Molly Tobin, now Microwave Division housemother who is seen peeking at the camera from the far end of the line, says “We were on our feet eight hours a day. But we moved around, from product to product depending on our job.” Ed King, now EPG training manager, is seen at center; girl at right is Linda Dean, Santa Clara housemother.



The summer picnic has been a family favorite ever since the very early years of the company. Part of that tradition has been the cooking and KP duties done by senior staff people. But they also found time—as Dave Packard shows above—for a horseshoe toss or two.





Early West Coast electronics trade-show exhibit, forerunner of WESCON, reveals growth of product line during the '40s. At right, development project involved doppler-effect instrument operated by Gene Stiles, now of Southern Sales Region, and observed by Bill Hewlett sipping morning coffee, and Art Fong, now engineering manager at YHP. By 1950 the company was developing products at the rate of 20 new electronic test instruments a year.



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mailing out data sheets and pictures. Promptly, users began to compare vocally and enthusiastically the equipment with the cumbersome, expensive instruments offered by competitors. Bill Hewlett presented the new oscillator at the 1938 I. R. E. meeting in Portland. The chief sound engineer for Walt Disney Studios heard the story and bought nine oscillators, for the stereophonic sound presentation of 'Fantasia.'

"This 'big' order did it. Hewlett's and Packard's theories were proving out; and their ideas about their own company to make such products seemed valid. So, in January, 1939, Dave and Bill flipped a coin to see whether it was to be Packard-Hewlett or vice versa. Hewlett-Packard won, and the company came formally into existence as a partnership.

"The new oscillator, dubbed '200A because the number sounded big, began to pay off immediately. The first profits were cranked back into the business; nothing was taken out that didn't just have to be. The two new partners concentrated on development of new instruments to broaden the base of the business.

"Both Lu Packard and Flora Hewlett worked like Trojans during this critical period to keep things going. If anyone had faith, they did.

"Then, the Pacific Gas and Electric Company needed a harmonic wave analyzer; HP produced and sold it. A square wave generator was developed. The first HP sales representatives, Neely Associates for the West and Crossley Associates for the Midwest, were appointed to sell the infant firm's products.

"By 1940, the little garage was badly outgrown, and

part of a small building on Page Mill Road in South Palo Alto was rented. The first plant's equipment was primer by today's standards—benches, a few shop-tools, painting and bright-dipping tanks. But the work was turned out. The first HP people came on the job to help with production. By year's end, HP had spread out to occupy the entire building. An audio signal generator, other audio oscillators and a distortion analyzer were added to the line.

"Physical expansion took place rapidly into 1941. More people joined the HP 'gang'. The 400A voltmeter, to become with the 200 series oscillators one of the most broadly used instruments in all electronics, was brought onto the market.

"With Pearl Harbor, the trickle of government orders turned into a stream, and then a flood. By 1942, sixty people were in the HP fold, and the emphasis was now on production. Nevertheless, development continued, and a new distortion analyzer and electronic frequency meter were added. At the same time, HP built the first of its own buildings, a 10,000 square foot office, laboratory and factory at 395 Page Mill Road.

"By 1943, the company's production for war was in high gear. One hundred people, working two shifts, were producing a dollar volume of instruments that was closing on the \$1,000,000 mark.

"Production still was the major objective; but development was not neglected. During 1943, the 100 series secondary frequency standards were introduced, and a further refinement of the 205 audio-signal generator appeared. De-

(continued)



This montage of photographs was used by *Watt's Current* to illustrate first big bash held in 1943 by the Harmony Plotters, a group devoted to helping fellow employees. Many faces will be familiar to old timers. The profile at upper left, of course, is Dave Packard. The young fellow holding the phonograph record is Ed Morgan, now manufacturing manager at San Diego Division. Ray Rooney, long the sports correspondent for *Watt's Current*, is at the microphone at left.



The Christmas party was a big day in earlier years. A highlight was the distribution of end-of-the-year profit-sharing bonus checks. From far end of platform are seen Noel Porter, Bill Hewlett, Frank Cavier, Dave Packard, and the late Noel Eldred. Profit-sharing was started as early as 1940.



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War Bond rallies were a feature of early industrial history at HP. Inspirational speakers were invited to help spark the drive to go "over the top."

Sports have always flourished among HP people. Participants in the company's first competitive game—basketball—were, from left rear: Norm Schrock, now at Colorado Springs; Jack Goodwin of AMD; Hank Meadows; Jerry Falla; Carl Mahurin of Corporate Training; and Ray Rooney of Santa Clara. Not shown, but a frequent and high-scoring player, was big Dave Packard. Early games got large turnouts of spectators—as do many events today.



velopment's main contribution, however, was in the microwave field. It was during this year that the groundwork for Hewlett-Packard's dominance of the signal generator field was laid.

"On its fifth birthday in 1944, HP production had reached \$1,500,000 annually. Personnel was stabilized at about 100 people, and continued so to the end of the war.

"By 1946, the readjustment from war to peacetime economy was completed. The company was now in better position to apply the invaluable experience gained during the pell-mell war years, and begin development of new instruments for science—and for industry. For even at this date, Packard, Hewlett and others at HP were convinced that the future of electronic measuring instruments lay not entirely in electronics itself or its allied markets, but in the big manufacturing and processing industries.

"Still, however, the electronic prime market was not overlooked. In 1947, HP introduced an FM monitor, 650A

test oscillator, and the important new 616A UHF signal generator. The same year the second major plant building was begun—a 21,000 square foot steel and concrete structure. Also, in 1947, the firm incorporated. Sales were again at the 1944 peak of 1½ million dollars.

"In 1948, new instrument development emphasized microwave equipment, and at the I. R. E. show in New York, a new slotted-line standing wave indicator and microwave power meter were introduced.

"The following year, still more new instruments were unveiled—including a distributed amplifier, low-pass filter and the 618A signal generator reaching into the super-high frequency range of kilomegacycles. Through 1950, the new instrument parade continued; HP was now developing and bringing onto the market new products at the unheard of rate of 20 new instruments per year."

The beginning was well begun. □



In the spirit of the holiday season and in the hope of suggesting some of the true international flavor of the organization, MEASURE brings you the first edition of Recipes from Around the HP World. Slim though the edition is, the range of foods is amazing—from a delicate meringue to a gargantuan Luau, and from a hearty casserole to a spicy **Hayacas**. Likewise, the methods of preparation are as diversified as a Chinese **wok**, a Hawaiian hole-in-the-ground, and—bless you, Henry—the engine block of the family Ford.

Enjoy!

FROM CHINA

Chow Gaan Laan

A favorite pastime for Mee Chow, technical illustrator for the Cupertino Division, is talking about, preparing—and eating—food. Her family and friends particularly enjoy her Chow Gaan Laan (braised broccoli).

Says Mee, “This dish is a good complement to chicken, left-over roast or whatever. Some people like to add to it julienne ham or sliced char shiu (Chinese barbecued pork).”

½ lb. tender, young broccoli
1 tsp. sugar
¼ tsp. salt
1 clove garlic
1 slice ginger
1 tbsp. sherry
1 tsp. cornstarch
2 tbsp. soy sauce (or oyster sauce)

Cut tender stems of broccoli into 1½ inch lengths. Use the young leaves and cut flowerettes by the stalk, or whatever bite size you wish. Peel tougher stems and slice. Crush or mince ginger. Crush garlic. Heat a little oil in frying pan or

Chinese wok. Sprinkle pan with salt to prevent oil from spattering. Lightly brown salt and add ginger and garlic. Fry broccoli and sprinkle in sugar. Cover pan and braise 3 to 5 minutes until broccoli is cooked (you can smell it), yet crisp and green. Stir together cornstarch, a little water, wine and soy sauce.

Stir a hollow in center of the broccoli, pour sauce into hollow and when hot and slightly thickened, blend with broccoli. Cover pan and braise contents another 3 to 5 minutes or longer, depending on desired doneness.

FROM FRANCE

Rabbit a la Moutarde

The French treat the preparation of their favorite Rabbit a la Moutarde with a mixture of tender, loving care and humor, evident in the following recipe contributed by the HP office in Orsay, France. A memo from the office said, "Since we believe rabbit is not a dish as appreciated in the U.S.A. as it is in France you can, if you wish, replace the beast with chicken or duck, although we are not sure the latter like to eat carrots or potatoes."

One 3 lb. domestic rabbit (reduced to essentials)
3 lbs. onions
3 tbsp. French Dijon mustard (this particular mustard is a must, as American mustard is sweetened)
1 cup cream
1/2 lb. butter
1/2 cup parsley
1 cup rice

Cut rabbit into 8 to 12 pieces to make sure it's unable to escape. Spread the mustard evenly on each piece, then brown them on all sides in butter. Do not let the mustard burn! When the rabbit is well browned, take it out of its pan for several minutes while you sauté the chopped onions. Now, put the rabbit gently to sleep on its bed of onions and allow it to take a good one-hour siesta on a low heat. Then blend in the cream, stir lightly, and serve with rice or potatoes (rabbits like them almost as much as carrots). Garnish with parsley.

FROM PENNSYLVANIA

Mushroom Salad

More than 60 percent of the world's commercial mushrooms are produced in Chester County, Pa., home for HP's Avondale Division. Farming the mushrooms has been a way of life for many Italian families whose grandparents settled there to work in the old marble quarries. In any case, HP's Mary Lou Daddezio has gained fame for her delicious way of offering the local product—Mushroom Salad. Her recipe has been tested by fellow employees on several occasions, notably when Avondale athletes have played host to New Jersey Division Olympians.

6 lbs. mushrooms
1/4 cup green pepper, diced
1 cup celery, diced
10 oz. jar stuffed olives, diced
1 cup black olives, diced
1 tsp. oregano

3 carrots, diced
1/2 tsp. garlic salt
1/3 cup salad oil
1/3 cup wine vinegar

Cut and wash, but do not peel, mushrooms. Bring to a boil in about 1 cup of water for about 10 minutes. Let cool, then add other ingredients and mix well. Serves about 20.

FROM SCOTLAND

Clootie Dumpling

Although Haggis was originally considered as an entrant representing the South Queensferry plant of HP Limited, it was turned down on the grounds that most readers would not have the stomach for it—literally, since it calls for the lining of a sheep's tummy. Instead, June Philip sent along the recipe for Clootie Dumpling. This turns out to be a fruit pudding cooked in a cloth—and very much in the holiday spirit, garnished with holly.

1 lb. self-rising flour
3 oz. sugar (brown or white)
4 oz. shredded suet
1 lb. raisins
3 tps. mixed spices
3 tps. cinnamon
2 tbsp. treacle (black)
1 pared cooking apple sliced or diced
1 egg
1/2 pint milk

Mix all ingredients together. Take a large cloth (like a tea towel) and sprinkle with flour. Put mixture in and tie cloth firmly at the top leaving enough space for the dumpling to swell. Put the dumpling in a large pan of boiling water—water should be about 1/4 of the way up the cloth. Boil for 2 1/2 to 3 hours. Take care pan does not boil dry. A plate placed at the bottom of the pan before the water comes to the boil facilitates the extraction of the dumpling once it is cooked.

FROM ECUADOR

Chicken Hayacas

Aida Nelson, Ecuadorian member of HP Labs finance department, recently brought samples of Hayacas to work, to the delight of her fellow employees.

1 chicken
1 1/2 lb. corn flour
1/4 lb. sugar
1/4 lb. garbanzo beans
1/2 lb. butter
1/4 lb. olives
1/4 lb. raisins

nutmeg
onions
green peppers
pimientos
tomatoes
5 or 6 hard boiled eggs cut up in slices

Boil chicken and cut it in very small pieces. Add the sugar to 6 cups of the chicken broth. Add the flour little by little until it forms a smooth mixture. Add the butter. Fry the garbanzo beans, onions, bell peppers, tomatoes, raisins, nutmeg, chicken and one tablespoon of sugar. Place one tablespoon of the mixture in a 10"x8" piece of aluminum foil. Place in the center of the mixture one tablespoon of the fried foods, one slice of egg, and one slice of pimiento. Close the foil. Steam for 30 minutes.

FROM GERMANY

Sauerkraut Casserole

International Division's Vera Mueller said: "As long as you're having a recipe from a German, you might as well have one with 'kraut.'" Vera's casserole is "delicious for four hungry ones on a cold winter night."

4 German frankfurters, sliced*
4 cups smoked ham, diced
1 can cooked German sauerkraut*
4 cups mashed potatoes

Place one half of the sauerkraut in a baking dish. Top with one half of the frankfurters and one half of the ham. Cover with remaining sauerkraut. Put remaining frankfurter and ham over the sauerkraut. Top with mashed potatoes. Dot with small pieces of butter. Bake in oven preheated to 350 degrees 30 to 45 minutes or until golden brown.

*For best results

Vera recommends the use of authentic German frankfurters and sauerkraut, which can be obtained at delicatessens.

FROM CALIFORNIA

Cream Sherry Pie

A dessert that has everything going for it—that's how Ruth Devereaux of HP Labs refers to her Cream Sherry Pie. It can be prepared ahead of time, it's beautiful to look at, and the meringue pie shell is lower calorie than a pastry shell. Ruth says the meringue shell is delicious with many other kinds of filling, particularly lemon, strawberry or any fresh fruit.

Meringue Shell:
3 egg whites (at room temperature)

HP recipes

to increase volume)

- ½ tsp. cream of tartar
- ¼ tsp. salt
- ¾ cup sugar

Add cream of tartar and salt to egg whites and beat to soft peaks. Add sugar one tablespoon at a time. Continue to beat until sugar is dissolved. Put in a greased pie plate and shape into pie shell with spatula. Bake one hour at 275 degrees. Cool.

Filling:

- 1 pint whipping cream or 2 packages powdered whipped cream substitute (Dream Whip)
- 1 cup cream sherry
- ¼ cup Creme de Cacao
- 1 envelope unflavored gelatin
- Garnish—choice of Brazil nut curls, slivered almonds or macaroon crumbs

Whip cream or prepare Dream Whip according to package directions. Store in refrigerator. Mix gelatin with sherry and Creme de Cacao and heat over hot water in double boiler until gelatin dissolves. Cool to room temperature and place in refrigerator until it starts to gel. Fold in whipped cream or Dream Whip. Pour in cooled meringue shell. Garnish. Refrigerate 2 to 4 hours.

FROM COLORADO

Roast a la Pike's Peak and Chicken a la Route 66

"You've got to be kidding!" But no. *Measure* learned that Colorado Springs people were sincere when they offered a beef roast recipe and a chicken dish that can be cooked on the engine of your car while driving to your destination. Originated as a publicity gag by a Colorado Springs newspaper during the annual car race to the top of Pike's Peak, Beef a la Pike's Peak and Chicken a la Route 66, actually work. Ruth Stockton, a Springs personnel secretary, has tried the chicken recipe herself and pronounces it delicious:

The Beef

- sliced or diced mixed vegetables
- 1 chopped onion
- One 4 oz. can pimiento, drained and chopped
- 2 cloves garlic
- ½ cup chopped parsley
- ½ cup wine vinegar
- ¼ cup salad oil
- 1 tsp. salt

- 1 tsp. pepper
- 3 to 5 lb. roast

Combine all ingredients except roast. Marinate roast in mixture overnight. Drain roast and wrap with 6 layers of heavy-duty aluminum foil. Tie with wire onto exhaust manifold (hottest part of engine). Drive 3 to 6 hours, depending on size.

The Chicken

- ½ tbsp. butter
- 8 chicken breasts, skinned and boned salt and pepper
- One 3 oz. package cream cheese
- ½ cup dairy sour cream
- 1 to 1½ packages frozen asparagus
- ½ cup parmesan cheese

Place butter on large square of heavy-duty aluminum foil. On top of butter place boned chicken breasts, then asparagus stalks. Spread on sour cream, top with cream cheese and sprinkle with parmesan cheese. Salt and pepper well. Wrap in heavy-duty foil at least 6 times and place on auto manifold. Secure well and drive for at least 2½ to 3 hours.

FROM INDONESIA

Gado-Gado (Salad)

With its multi-racial society, Singapore is rich in the culinary arts. A favorite of the Malay population is Gado-Gado, as prepared by Fatimah bte Selamat of HP Singapore:

Boil the following:

- 6 eggs (sliced)
- 4 potatoes (sliced)
- Cabbage leaves (cut into square or shredded)
- 2 teacups bean sprouts
- 2 teacups long beans (cut into 1" lengths)

Fry the following in 4 dessertspoons oil

- 4 pieces dried bean cake (cut into squares)
- 8 prawn crackers
- All of the above to be arranged in a plate when cooked

Gravy

- 1. 3 teacups coconut milk from ½ coconut
- 2. Squeeze 1 egg-sized tamarind with 1 pint of water
- 3. 1½ teacups roasted peanuts (pounded)
- 4. 20 fresh chillies (half or all seeded)
- 5. 1 piece dried prawn paste (2" x 2" x ½", roasted)
- 6. 1 piece garlic

To make gravy

Ingredients 4 through 6 to be pounded,

then fry in 2 dessertspoons of oil until aromatic. Add juice of tamarind to the boil, allow to simmer for a few minutes. Add coconut milk, salt and sugar to taste. Finally add pounded peanuts. Pour gravy onto plate of food.

FROM HOLLAND

Potato Croquets

A Dutch holiday potato treat is a favorite childhood remembrance of International Division's Gerda Cordla.

- 1 lb. cold, boiled potatoes
- ½ lb. lean ground beef
- 1 stalk celery, chopped
- 1 green onion, chopped
- 1 tbsp. white or yellow onion, chopped
- 2 eggs, separated
- salt
- pepper
- nutmeg
- bread crumbs

Brown meat slightly. Add celery, onions, salt, pepper and nutmeg to taste. Cool. Mash potatoes. Mix with egg yolks and salt, pepper and nutmeg to taste. Fold in meat mixture. Form croquets and roll in egg white, then bread crumbs. Fry croquets in skillet with oil until golden brown. Serves about 6.

FROM POLYNESIA

Luau Pork

Anyone who has attended a luau given by the Harmony Plotters, Peninsula HP's social group, can attest to a delicious feast. Authentic, too, since it was prepared by three Hawaiian-born members of the Manufacturing Division: Tom Rei Gil Pereira and Moses Shim.

It takes Tom, Gil and Moses several weeks to prepare for a luau. Small wonder when you scan the list of necessary ingredients. Some are imported from Hawaii, others can be obtained from Hawaiian or Chinese grocery stores.



Assemble:

1 lava rock
Kindling and firewood
Banana tree stumps, shredded
Chicken wire
Ti leaves
Banana leaves
Burlap bags
Whole pig and/or pork butts
Rock salt
Side dishes of your choice: yams,
chicken, fish, turkey

Allow 1 lb. pork per person. Use whole pig weighing at least 60 pounds to bring out the flavor, or at least 3 or 4 pork butts, weighing 8 to 10 lbs. each.

Dig pit about 18" to 2 feet deep. Put in kindling and firewood. Put lava stones on top and light fire. Slit whole pig between ribs and rub rock salt into slits, inside stomach cavity and under armpits. Slit pork butts to the bone about 1" apart and rub rock salt into slits. (For the average family or small dinner party, a greatly-simplified way to obtain a shade of Luau Pork's flavor is to prepare pork butt roasts with rock salt as you would for pit cooking, then cook in the oven.)

Place hot lava rock inside pig and under armpits. Put ti leaves on chicken wire, place pig on top of leaves and roll wire and leaves around pig. Level off hot coals in pit and place shredded banana stump over the coals. Place pig in center of the pit and place other meats or potatoes around pig. (Cover with ti leaves if possible.) Cover all with banana leaf. These create steam, helping to cook the food. Wet the burlap bags, wring out excess water and cover pit with the bags. Shovel dirt back onto the pit. When steam escapes from pit, put more dirt on pit to seal. Uncover 3 or 4 hours later.

FROM JAPAN**Butterfly Fried Shrimp**

A recipe reflecting his Japanese heritage is offered by John Sera of the Manufacturing Division. John enjoys the role

of cook so much he even works for a restaurant one night a week.

1 cup cornstarch
½ cup flour
1 egg
1 tsp. baking soda (more if you wish
batter to be crisp)
1 tsp. baking powder
sufficient water to thin batter to
consistency of crepes
shrimp

Take skin off shrimp, leaving tail. Butterfly shrimp by running knife almost through back. Opening up split shrimp gives butterfly effect. Combine ingredients for batter and dip shrimp in batter. Heat oil in frying pan to 350 degrees. Fry shrimp until golden brown.

FROM INDIA**Mutton Curry**

The very essence of exotic India is suggested by this recipe—and by Saraswathi, the HP Singapore lass (see back cover) who prepared it:

2 lb. boneless mutton (from leg
or shoulder)
2 tablespoons of oil or ghee
(clarified butter)
2 medium onions, diced
2 cloves garlic, crushed
2-3 tablespoons curry powder
½ cup chopped green capiscum
(pepper)
1" piece green ginger, grated or
½ teaspoon ground ginger
1½ teaspoons salt
1 cup stock (use stock cube and water)
½ cup seedless raisins (optional)
3 tablespoons yogurt

Trim mutton and cut into small, neat cubes. Heat oil or ghee in a saucepan and add onion and garlic. Fry gently until soft. Stir in curry powder and cook for 1 minute. Increase heat and add mutton.

Cook, stirring occasionally, until meat changes color. Add remaining ingredients except yogurt. Reduce heat when curry reaches simmering point. Cover and simmer gently for 1½ to 2 hours until meat is tender and liquid reduced to a thick consistency. Stir in yogurt, heat without boiling and serve.

FROM NEW ENGLAND**Cranberry Bread**

The cranberry bogs native to New England inspired the recipe sent by Lucille Lewis of the Medical Electronics Division in Waltham, Massachusetts.

2 cups flour

1 cup sugar
1½ tsp. baking powder
½ tsp. soda
1 tsp. salt
4 oz. orange juice
2 tbsp. butter, melted
2 tbsp. boiling water
1 egg, well beaten
1 cup cranberries, cut in half
½ cup nuts

Mix shortening and sugar. Add dry ingredients. Add juice, eggs and water and mix well. Add cranberries and nuts. Bake at 350 degrees for one hour.

FROM CANADA**Tourtiere**

From HP (Canada) Ltd. comes Tourtiere, a type of meat pie that is an old French-Canadian delicacy. Tourtiere was prepared for *Measure* readers by Madeline Studd, administrative secretary at the Pointe Claire (Montreal) office.

Have ready pastry lined pie plate and pastry topping

1 small onion, chopped
1 small clove of garlic, minced
½ tsp. salt
½ tsp. savoury
¼ tsp. celery pepper
¼ tsp. ground cloves
½ cup water
½ cup diced fresh bread
1 lb. lean minced pork

Place all ingredients in saucepan except the bread cubes. Bring to a boil and cook twenty minutes uncovered over medium heat. Add bread cubes and let stand for 10 minutes. Cool and pour into pastry lined pie plate. Cover with pastry. Bake in 500 degree oven until the top is well browned. Serve hot. Bon appetit!

FROM CHINA**Prawn Fritters**

This delicacy comes from Josephine Tan Siew Geok as one of three recipes from HP Singapore:

1. 2 dozen medium sized prawns,
shelled and cleaned
2. oil for deep frying
3. 1½ cups flour
4. 1 teaspoon salt
5. 1 beaten egg
6. 3 tablespoons water

Make a smooth batter of ingredients 3 through 6. Add prawns to this. Heat oil in pan and when hot drop prawns into it by dessertspoonful. When golden brown, drain on paper, garnish with lettuce, cucumber, tomatoes and spring onions.



News in Brief



Would you say that HP's booth at the recent Fall Joint Computer Conference in Las Vegas was well attended? The fact that it was centrally located certainly helped, according to observers. But the major attraction was the new System/3000 together with the other new computer and calculator systems and peripherals. Held November 16-18, the conference drew visitors from business, industry and education around the world.

Palo Alto — Preliminary figures reported by the company indicate that HP's sales totaled \$358,830,000 for the fiscal year ended October 31, a 3 percent increase over sales of \$347,322,000 for fiscal 1970.

Net earnings of \$23,172,436 were slightly higher than the \$23,102,787 earned in 1970. On a per share basis, however, earnings showed a one-cent decline because of a greater number of shares of common stock outstanding in 1971. The 1971 estimated earnings equaled 89 cents a share on 26,037,751 shares outstanding, compared with 90 cents a share on 25,649,111 shares in 1970.

The figures for fiscal 1971 are tentative; the audit is expected to be completed in mid-December and final figures reported at that time.

President Bill Hewlett said the company's incoming orders totaled \$380,797,000 in 1971, a gain of 9 percent over orders of \$350,398,000 booked in 1970.

"Reflecting a continuing improvement in our domestic business," Hewlett said, "orders from U.S. customers during the fourth quarter amounted to \$57,607,000, up 26 percent over the corresponding quarter of 1970. International orders were up 13 percent to \$38,049,000."

Avondale—Two major management appointments for Hewlett-Packard's analytical instrument activities have been announced by Emery Rogers, general manager of the Avondale Division.

Mason Byles will assume worldwide marketing responsibility for HP's analytical instrument line, and Ed Truitt has been named manager of the company's Scientific Instrument Division located in Palo Alto. Both appointments are effective December 1.

Byles will have his office at the Avondale plant in Pennsylvania. He joined the company in 1962 and

most recently has been responsible for the formation of HP's Scientific Instrument organization.

Truitt joined HP in 1961 and has held several key management positions, including responsibility for manufacturing at Avondale.

Today, HP's analytical instrument line includes gas chromatographs, data-handling devices for analytical instruments, molecular weight determination equipment, and digital thermometers, all produced at Avondale; and spectrometers of several types, as well as radiant flux meter systems, produced at Scientific Instruments.

Correction: In the November issue, MEASURE referred to one of the four HP Labs sections as "Special Projects headed by Len Cutler." The actual title of this section is "Physical Research Laboratory."



From the president's desk

The preliminary figures for the company's 1971 fiscal year were just recently released, and overall I feel the results are generally good.

It is important to remember that we entered this fiscal year with many of the same problems that faced us during 1970. The domestic economy was still in a state of decline, and our production capabilities continued to exceed incoming orders. Under these circumstances we found it necessary to retain the 10 percent work reduction schedule during part of the first quarter to avoid having to lay off any of our people.

Our second quarter domestic order rate showed some improvement, but unfortunately this was offset to an extent by a decline in the rate of growth in our international business.

During the last half of the year a gradually improving domestic economy and our introduction of some major new products helped us finish out the year without suffering any further deterioration in our earnings.

Business conditions for the year ahead are still not too clear, particularly in the international area. Much will depend on the President's success with his balance of payments programs, and on the establishment of more stable exchange rates between our government and its trading partners.

The loyalty and hard work all of you have shown during the past 12 months has us starting off the new fiscal year in strong shape compared with many other companies in our industry. I am particularly encouraged by the number of significant new products that will be coming on stream in the months ahead. My congratulations to each of you on the job that you have done this past year, and my best wishes to you and your families for a very pleasant holiday season and a rewarding and satisfying new year.

Bill Hewlett



With almost every major race and country now represented among the HP "family," it seemed only right at the onset of the end-of-year Holiday Season that its members share some of their uncommon heritage, namely their favorite regional recipes. To this end, MEASURE presents "Recipes from Around the HP World" on pages 10 through 13. The girls above, all members of the HP Singapore manufacturing team, really entered the spirit of the occasion with traditional dresses as well as dishes: From left are Fatimah bte Selamat with Gado-Gado salad from Indonesia, Josephine Tan Siew Geok with a dish of Chinese prawn fritters, and Saraswathi with mutton curry from India. Happy holiday!

Measure

EDITOR
Gordon Brown

ART DIRECTOR
Tom Martin

CONTRIBUTING EDITORS — AUTOMATIC
 *BIRMINGHAM, Sallie Wells • AVONDALE,
 Matt Whittier • COLORADO SPRINGS, Dick
 Ouellette • CUPERTINO, Al Fisch • EASTERN
 SALES, Ellen Dericks • HP ASSOCIATES, Jean
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 YHP, Taeko Kanda



1501 Page Mill Road, Palo Alto, California 94304