

## GE ventures

Every Sector is backing fast-track businesses with high risk/reward ratios. Here's a sampling.

General Electric, which started as a venture, continues to recognize that future success depends, to a great degree, on the ventures now being identified and developed. All of the various GE Sectors are nurturing new ventures—giving them top-level support and making them a key part of the strategic business planning process.

How does GE define a venture? "It's the faster growth segment of an enterprise, with a high risk/reward ratio," offers Standley H. Hoch, staff executive—Strategic Planning Integration Staff. "It's a business with top-level endorsement and dollars, and has the potential to grow faster than the GE Strategic Business Unit of which it's a part. It's independent of size and age and can exist anywhere in the product/market life cycle. It's formed to create an entrepreneurial climate that is more responsive to changing customer needs and wants."

While most GE ventures have grown from the Company's technological strengths, GE ventures also have been formed to take advantage of changing markets. Some GE ventures are extensions of both product lines and markets. Notes Hoch: "The Company's ventures today tend to be smaller, and often involve several components working together. The laws of probability and risk are thereby more spread out, and greater synergy among components results."

Venture managers impress an observer as a special breed of GE people—hard-driving, results-oriented, risk-taking individuals who know how to "compress time" and shorten the learning curves. States Martin J. Holleran, program general manager—Ventures, for Consumer Products and Services Sector: "Venture management stresses building a business around people who embrace new ideas as a fundamental tenet of their management style. The venture process allows the Company to place high-potential people in charge of 'new' businesses. The objective is two-fold—develop the business and the individual."

According to Dr. Robert W. Baeder, Industrial Products and Components staff executive—Business Development and Strategic Planning Operation: "Aggressive business development programs such as ventures encourage an exciting climate and the entrepreneurial spirit necessary for the future prosperity of GE."

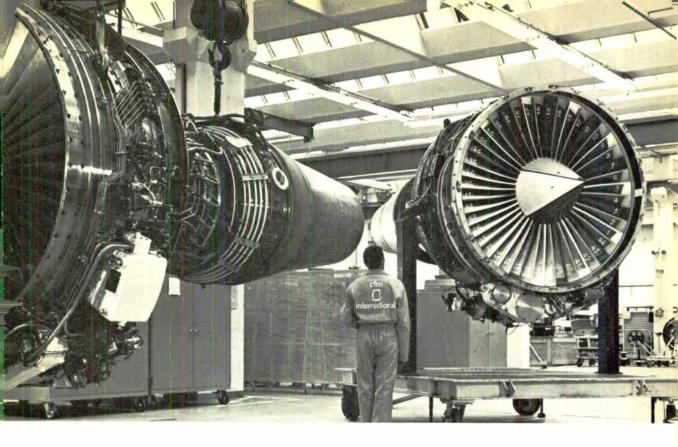
The following are only a few of the many new GE ventures now being given top-level attention by Sectors.



## Takeoff for CFM56 jet engine

The result of more than five years of development, the new 24,000pound thrust class CFM56 jet engine brings high bypass turbofan technology to smaller aircraft. It was developed jointly by Aircraft Engine Business Group and France's largest engine manufacturer, SNECMA. This spring, CFM International—their joint company-announced that United, Delta and Flying Tiger airlines plan to re-engine 52 of their DC-8 aircraft with the CFM56 engine, and other DC-8 operators are negotiating to re-engine.

"Potential CFM56 users include new and re-engined 707 jetliners, the KC-135 tanker, the proposed European JET aircraft, and derivatives of present short-tomedium-range standard-bodied aircraft," states Jacques Rossignol, SNECMA program manager. Adds Richard B. Smith, GE program manager: "Increased air travel, noise regulations and fuel costs should make the CFM56 attractive to airlines. Instead of disposing of many of their older planes, airlines now have the option of re-engining their 707s



and DC-8s with the CFM56 lownoise, fuel-efficient engine."

The CFM56 program has the full backing of GE and SNECMA

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resources. Aircraft Engine is responsible for the CFM56's high pressure system, main fuel control and system design integration.

SNECMA portions include the low pressure system, reverser system and engine installation.

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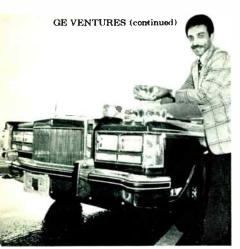
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#### Contents

On the cover: London's Scotland Yard uses personal radio equipment built by Storno, GE's Denmark-based mobile radio affiliate. For details of how integration of GE and Storno is sparking a new competitive drive on world markets, see pages 22-24.

THE BUSINESSES
INTERNATIONAL
PEOPLE
PERSPECTIVES

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Sylvestre Jean-Baptiste

## First commercial all-plastic headlamp

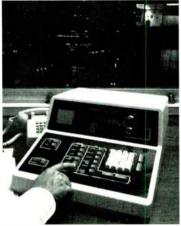
"We're making headlamp history -there's no other such product on the market!" declares Cleveland's Sylvestre Jean-Baptiste, Jr., manager—Plastic Automotive Lamp Venture for Miniature Lamp Department. He is one of several young managers in Consumer Products and Services Sector picked for a venture management assignment. States Jean-Baptiste: "Through use of GE Lexan® plastic, three of GE's new sealed. beam halogen headlamps weigh only as much as a single glass halogen unit. The new plastic headlamps can cut three pounds from the weight of a fourheadlamp vehicle, and can help car manufacturers improve gas mileage."

This January, Ford became the first car company to order the GE plastic halogens, which will be used on 1980 Lincolns. "This venture began in early 1978, and is a year ahead of schedule," says Jean-Baptiste. "Plastic halogens enjoy a definite edge over glass lamps in terms of styling flexibility and weight reduction."

He continues: "Development of this headlamp technology began in 1973, led by Miniature Lamp laboratory manager Vince Vodicka. Seven GE operations in two Sectors—plus Corporate Research and Development—contributed to the venture." He notes: "The plastic headlamp is easy to retrofit, and has superior impact resistance. In addition to the new-car industry, significant opportunities exist in both the replacement and specialty markets."

## Microprocessor-based lighting control

Lighting consumes some 30% of all electricity used in commercial buildings. By using GE's new programmable lighting controls for offices, stores and factories, it's possible to save as much as 40% of this lighting energy. Tests show that the new microprocessor-based



Newest electronic technology

controls can pay for themselves in less than two years, by automatically providing the right amount of light where it's needed and when it's needed.

"This venture product is an outgrowth of a four-year development program between Wiring Device Business Department and Corporate Research and Development," explains Providence's Thomas Swetnam, manager—Programmable Lighting Control Venture Operation. "Specifier acceptance of this very newest electronic technology, based on demonstrations in 25 U.S. cities, has been very gratifying."

A prototype system has been in operation at the AT&T headquarters in Basking Ridge, New Jersey, for two years—resulting in a documented 40% energy savings.

"Government pressures for further savings should stimulate General Electric's market growth," says Swetnam. "Our system provides override capabilities by means of the Touchtone" service or standard wall switches. People who come to work early, or stay late, won't be left in the dark, nor will they have to turn on lighting for an entire floor. The system can even remember when someone's away on vacation!"



Sam Hardy

### New tools for load management

All budget-conscious homeowners would like more control over their electric bills. Utilities would like to "even out" their daily load peaks and valleys, in order to reduce their costs and conserve precious fuels. General Electric's answer? Two new programmable time-of-day watthour meters for the home—as well as a centralized load-management system using the utility's distribution lines for two-way communication between the utility and home.

"Ours is a two-part venture," observes Sam G. Hardy, manager -Load Management Products Operation for Somersworth, N.H.'s Meter Business Department. "In 1977, we introduced the IR-70 programmable time-of-day watthour meter, and a more sophisticated version, the IRM-70 watthour demand meter. More than 50 utility companies have purchased these new t-o-d meters. They permit time-differentiated pricing, which usually means higher prices for peak electricity usage and lower prices for off-peak usage."

Continues Hardy: "Additionally, GE is offering the new AMRAC® (automatic meter reading and control) system, which lets a utility read meters by remote control, process this data in a computer, and determine customer billing. Also, this system allows utilities to transmit control commands to each home, so as to shift some load to off-peak hours." Already, utilities are testing the AMRAC system, and three utilities have placed orders.

## New push for service contracts

A key part of the Major Appliance Business Group's thrust toward services growth is the Louisvillebased service contract venture. Only 4% of GE's major appliance customers now have out-ofwarranty service contracts—yet studies show that at least 50% of GE customers would like to be served. "A huge opportunity exists for the Company in this area," maintains Louisville's Guido DiGregorio, manager-Service Contract Venture for Product Service Department. "Our goal is to increase the average annual growth rate of contracts by 30% a year-and nearly quadruple sales by 1983!"



Guido DiGregorio

This venture began last spring when a new benefit-oriented, direct-mail campaign was tested. Results were spectacular. "We saw a 55% improvement in the number of 'warranty customers' signing up, and a 27% improvement in 'renewal customers'," notes DiGregorio. "Based on this test, we've rolled out this campaign nationwide."

Until recently, GE concentrated its service-contract efforts on customers in areas where GE factory warranty service is available. This strategy is changing, DiGregorio says. "In January, the Company contacted some 2000 GE 'Customer Care' servicers in order to refranchise them for service-contract work as well. The response has been excellent—and in June, we will begin a national solicitation for service-contract customers in many non-factory-service locations as well."

## Two advances in gas turbines

GE gas turbines continue to be leaders in technology for world-wide applications. Now, by advancing their technology, the Company has "spun off" two new turbine ventures. GE's MS6000 and MS9000 gas turbines are technical and business pacesetters—units offering "the right size, right cost, at the right time."



MS6000 - a new offering

"The MS9000 is a 'scaled up' version of the proven MS7000 design, and is intended to fill international power-generation market needs for 50-hertz systems,' states Schenectady's Warren H. Bruggeman, general manager-Gas Turbine Engineering and Manufacturing Department, "An advanced version of this unit, which is now being manufactured, will produce 111 megawatts, and will have 40% more output than the MS7000. The first advanced MS9000 unit has been ordered by a Federal Republic of Germany utility for installation near Hanover, with commercial operation slated for 1980."

Now under start-up testing for the Montana/Dakota Utility Company in Glendive, Mont., is the first GE MS6000 gas turbine, which augments the product line in the 30-40-megawatt range. "The MS6000 can produce 40% more power at a 10% better heat ratecompared to the MS5000," says Bruggeman. "The MS6000 is also a 'spin off' from the earlier MS7000, and is designed for 50and 60-hertz utility and industrial customers. A Federal Republic of Germany utility has ordered two MS6000s, for startup in 1981."



Gerald Seay (I) and Phillip Ness

## On-site machining

Obviously, it's often impractical to return large machinery to the factory for service. Not as obvious for many owners of this equipment, however, is how they're going to obtain repairs.

Enter General Electric.

As of last July, Schenectady's Apparatus Service Business Division has a Sector venture for providing on-site machining service to both General Electric and non-GE customers—where size, weight, removal cost, contamination or downtime make machining at the customer's location desirable.

"Our strategy involves targeting those jobs which require specialty skills and tools and which have high 'repeater' potential," says Gerald S. Seay, manager—On-Site Machining Venture. "We rush our portable machine tools to the customer's site by truck—by aircraft if it proves necessary—and complete most jobs in less than a week. We move fast—often working on weekends, holidays and during the night to keep downtime to a minimum."

Apparatus Service Business Division first undertook on-site machining work in 1973. Now, as a venture, it has expanded to six U.S. on-site machining centers. Plans to open new centers in Australia, Singapore and Europe during 1979-81 are currently being evaluated.

Pictured above: Seay with Schenectady's Phillip D. Ness, manager—On-Site Machining Programs.

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Stafl (I), Lozanski and Ladd VP R. Spence

### Oil and gas exploration

A good example of how to use the internal resources of the Company in an entrepreneurial manner is the three-year, joint exploration venture of Canadian General Electric and Ladd Petroleum Corporation, a Utah International subsidiary. Formed in 1978, this 50/50 venture enables CGE and Ladd to spread the risks of oil and gas exploration. The venture allows CGE to diversify into Canada's resource sector, and Ladd obtains new funds for capital spending.

"Five out of seven exploratory wells drilled in the venture appear to be successful gas wells," states Ladd's Wally R. Lozanski, Canadian division manager in Calgary, Alberta. "Estimated gas reserves for the five wells amount to 9.5 billion cubic feet.'

Notes Canadian General Electric's V. Gerold Staff, VP and comptroller, in Toronto: "Ladd and CGE own jointly more than 25,000 acres in Western Canada. Based on oil and gas exploration earlier this year, we hope to exceed our 1979 goal."

At least eight additional wells will be drilled this year in Canada under the joint venture agreement.



Service Shop joint venture

### Opening new markets— Saudi Arabia

International market development is the means by which GE builds a sales presence in developing countries. In 1975, based on International Sector's business assessment, GE opened its first office in Saudi Arabia. Now, four years later, GE has sales offices in Riyadh, Jeddah and Al Khobar. In 1978, Saudi Arabia was one of the top five countries for GE export sales. Its sales last year showed nearly a 500% increase over 1975.

In support of this export sales activity, GE has started four joint ventures, which provide the local investment base for continuing export sales growth. The oldest is Saudi Electric Supply Company begun in 1976 with GE Supply Company and two GE distributors. Other j-vs include a GE Service Shop j-v, MEELSA; SST, a j-v between Sade/Sadelmi, the Company's construction affiliate, and two GE distributors; and a Distribution Assemblies Department j-v, JEDAC.

States Adel Ziady, GE country sales manager: "Shortly, through JEDAC, GE will begin assembling panelboards, switchboards, switchgear and busway in a new Jeddah facility.



James Sharpe

### Roof-bolting resin capsules

Providing safer working conditions for underground miners is being accomplished through a joint venture of Laminated and **Insulating Materials Business** Department and Mining Products Department. By using General Electric polyester resins to resinbond a mine's roof bolts to overhead rock strata—instead of using mechanical bolts-mines are made much safer.

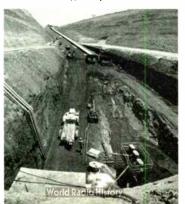
"Since GE already sells carbide mining tools to underground miners, resin capsules are a natural extension of our product line," explains Bristol, Va.'s James M. Sharpe, product general manager -Carboloy Mining and Construction Products. "Resins are more expensive than mechanical boltsbut Federal mine regulations are becoming stiffer, and mines with increasingly poor roof conditions are being developed. Additional conversion to resin is expected."

Continues Sharpe: "Since the resin-capsule venture was formed in 1975, sales have shot up an average of more than 150%. We've moved rapidly up the capsule's 'learning curve,' and now are capitalizing on the Company's technological developments.'

### Underground mining of coking coal

The Australian coking coal reserves currently being mined by strip-mining methods are finite. Over the next decades, in Central Queensland's Bowen Basin, mining engineers at Utah International and other mining companies believe that many existing coal seams will require underground mining to be exploited fully. Utah has set up parallel development efforts to extend the lives of its surface mines—underground technology and new deep stripping techniques—to increase its flexibility and options.

Utah's first venture into underground coking coal mining was taken last September, when its Harrow Creek trial colliery in Australia began operation. Ob-



serves mine manager Jon Sleeman: "Harrow Creek is a valuable Utah 'proving ground'. Production already is up to the expected level of 250,000 metric tons of saleable coking coal annually. Over the next decades, as Utah's surface mining operations are augmented by underground mines. Utah will build up its experience in underground methods, and can make an orderly transition."

Sleeman is now heading a Central Queensland Coal Association group which is assessing other Australian underground mining opportunities.



Sector technologists take center stage as GE technical managers meet.

## Accent on technology

At the 1979 Technical Management Conference, over 500 participants joined in appraising technology as 'the make-or-break factor in this Company's future.'

"General Electric is nothing if it is not a great science and engineering Company. That's our birthright . . . that's our heritage . . . that's our business."

On April 3-5, a total of 511 GE people from ten countries and 25 different states of the U.S. assembled at the Homestead in Hot Springs, Va., to consider how to sustain these words of GE Board Chairman Reginald H. Jones as an apt description of General Electric.

Chairman Jones also expressed the most fundamental challenge facing the participants in this, the third GE Conference on Technical Management: "to stimulate the kind of motivation and camaraderie among our scientists and engineers that makes General Electric an exciting. inventive and satisfying place for creative people to work."

The program organized for the Conference struck a nontechnical observer as a highly complex experience, a multi-ring show whose knowledge-acquiring opportunities far outran an individual's ability to absorb. Simultaneous panel discussions, concurrent "rap sessions," the exhibits of 22 GE operations all clamoring for attention, forced the participant to choose

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Many-phased activities at the Conference featured exhibits by 22 GE operations (left) and discussions of manufacturing technology.

and follow one mainstream, knowing that other opportunities were unavoidably being missed.

But the impression left by the Conference was that that was how it had to be, if anything like the technologist's current spectrum of concerns and vital interests was to be incorporated into the Conference's three-day span.

How to reach an R&D balance between shortterm help to operations and basic exploration in the disciplines important to GE? How to reflect the ascendancy of digital information technology over analog? How to tighten the bonds between technical planning and strategic planning? How better to integrate the technical work of engineering, manufacturing and the other functions? How to infuse "the new electronics" more effectively into GE products and manufacturing processes? These and similar hard questions provided the content of the Conference, hosted jointly by Arthur M. Bueche, senior VP—Corporate Technology, and Robert B. Kurtz, senior VP—Corporate Production and Operating Services.

In response, Art Bueche led a morning's review of the state of GE technology—"It's strong, but our purpose is to make it stronger."

The session included a survey of GE R&D by Roland W. Schmitt, VP—Corporate Research and Development, and a report on "Technology and Human Resources" by Frank P. Doyle, VP—Corporate Employee Relations Operation. Bob Kurtz chaired a fast-paced series of talks on seven different aspects of the interchange between technology and productivity.

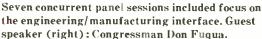
A final multi-phase review was led by Robert R. Frederick, senior VP—Corporate Planning and Development, on the technological implications of strategic planning challenges.

Panel sessions were conducted concurrently in seven critical technical areas—Electronics, the Engineering Manufacturing Interface, Manpower, Manufacturing Technology, Materials, New R&D and Product Innovation, and Software.

Similarly, simultaneous afternoon meetings were given to "Sector Technologist Rap Sessions" featuring the five recently appointed Staff Executives—Sector Technology Operations, who are members of the Corporate Technology Council.

And in an evening session the conferees heard Congressman Don Fuqua, chairman of the House Committee on Science and Technology,







express the need for a revitalization of U.S. technology and a turnaround in the nation's R&D expenditures as a percentage of the GNP.

Winding up the Conference, Reg Jones assured the attendees of his personal commitment to technology "as the make-or-break factor in this Company's future." Having requested the Corporate Technology Study several years back, he made the Technical Management Conference an occasion to highlight some of the benefits now accruing from the Study:

- "Strategic plans, almost across the board, show evidence of better integration of technology planning with business planning."
- Another early action prompted by the Study was "the appointment of the Sector Technologists and the Corporate Technology Council."
- New manpower programs flowing out of the Study include a Corporate entry-level program for engineers and scientists, called the Edison Engineering Program, and a management program for first-line technical managers, called the Professional Employee Management Course. "These," the Chairman said, "could make a major contribution to our manpower development processes."
- The Study also pinpointed a number of problem areas requiring the technologists' urgent attention. "One," Chairman Jones said, "is to stop re-inventing the wheel. That old devil, the 'not invented here' factor, still lurks in the spirit of General Electric. New technical exchange techniques must be developed and used." He cited other problem areas ranging from the need to accelerate the use of CAD/CAM interactive graphics to changes in recruitment and training so as to provide GE with more people who can "think in digital terms."
- The end-result of the Study, he said, is that "technical strategy is beginning to win the prominence it deserves."

Reg Jones summed up by commenting that the forward steps prompted by the Study, together with the complex technical challenges it underscored, put the technical managers "in the catbird seat today—or the hot seat, if you prefer." He asserted to the conferees that "we are looking to you for action, innovation, change, a decisive thrust that will position this Company for a surge of sustained earnings growth in the 1980s," and he called on them to transmit to their associates back home the enthusiasm he saw displayed at the Conference.

Workers erect transmission lines (r) to carry power to rural areas. Below, electric power runs a concrete block machine.

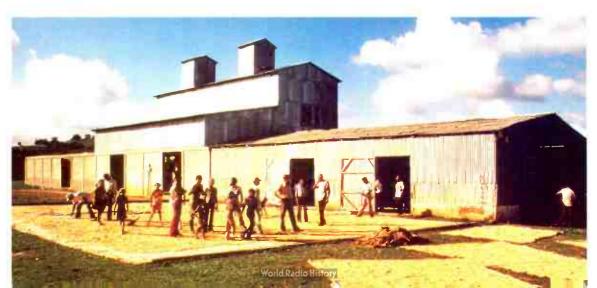






# Getting started,

Main street of Laguna de Nisibón, lit by GE mercury vapor lamps (1). Electric grain driers in food co-op (below) prepare rice for storage.



### GE is chosen to help bring electricity to 160 rural villages such as Laguna de Nisibón.

In the Dominican Republic town of Laguna de Nisibón in the early 1970s, farmers dried their rice crops by setting them out in the sun, and workers produced concrete blocks with a primitive manual press. The reason: electricity still had not reached the town, typical of 160 such unelectrified rural villages in the country.

Recognizing the disparities in a situation in which the capital city, Santo Domingo, with 16% of the population, was consuming 70% of the nation's power output, the Dominican government in 1971 embarked on an ambitious rural electrification plan.

But how could the plan be implemented? Seeking the essential expertise, the government recognized that General Electric had constructed two steam power generation units on a turnkey basis at Rio Haina near Santo Domingo. Further, in GE's International Projects Department (IPD) and the Italy-based construction affiliate, Sade/Sadelmi, the Company had two

**electrically** 

components experienced in carrying through major construction projects. GE was asked to help with the electrification plan, which would involve augmenting and expanding existing steam power generation facilities.

The first tangible results of this decision came in 1973, when the Dominican government utility contracted with IPD to supply two 85-mw steam turbine-generator units at Rio Haina on a turnkey basis. Sade 'Sadelmi was brought in for the civil and electromechanical installation, and Schenectady's Projects Engineering Operation handled the engineering. The new contracts were backed by experience that began in 1968, when IPD handled the first turnkey installation of Rio Haina's power plant, which consisted of two 54-mw GE steam turbine-generator units. In 1970, the second unit was installed—with

Sade Sadelmi as a subcontractor to IPD.

Power being generated by Haina units 1 and 2 was so urgently needed that they were kept in operation while IPD and Sadelmi tied in units 3 and 4. The Company rushed equipment from its various U.S. locations. GE products included high-voltage power transformers, auxiliary transformers, medium-voltage switchgear, general control panels, motor control centers and electric motors.

Haina units 3 and 4 began operating in 1976, supplying power for Laguna de Nisibón and other villages in the eastern province of Altagracia. Also in 1976, Sadelmi—which had received a government utility contract to build transmission lines to a number of rural areas included under the rural electrification project—began its arduous work of stringing miles of lines from Rio Haina through swamps and timberland and across mountains.

This April, based on General Electric's fine performance record, the Dominican government utility ordered a fifth 85-mw GE steam unit, which will employ the same GE construction team and components.

Electrification has wrought dramatic changes in Laguna de Nisibón. An electric concrete block maker now churns out building blocks for homes. Electric grain driers prepare rice for storage in the town's food co-op. GE mercury vapor lamps supplied by Grupo Electrico Industrial, a GE Dominican dealership, light the main street. Young workers attend evening classes at the electrically lit one-room school. TV brings news of the outside world, and refrigerators keep food and antibiotics from spoiling.

Says Guillermo Paniagua of the government utility: "To the people of Nisibón and 159 other villages, electricity is still a miracle. We're making progress—but much remains to be done." The U.S. Rural Electrification Administration estimates that, with the exception of two countries in Latin America—Nicaragua and Costa Rica—only 5% of the rural homes in this part of the world have electricity. And worldwide, nearly one billion people in rural areas are living without electricity—100 years after the invention of the incandescent lamp. Laguna de Nisibón is a positive example of what can be accomplished.

# Hiring the vet

Vietnam Veterans Week, May 28-June 3, is being observed as we go to press. Here, some General Electric vets reflect on the war —and their move into civilian life.



#### John Davern: helping hire other Vietnam vets

"With a scout-dog team, you're at the 'point' [front line]. When the dogs detect an ambush, you alert the platoon and combat begins. My mission in Nam was not to take lives, but to save them. I like to think that, because of my efforts, I was able to send home all but one of my guys." The speaker is Syracuse's John P. Davern (above), manager—Union Relations and Personnel Practices with Television Component Products Section. As an Army first lieutenant, he saw action in the 1968 Tet Offensive and helped relieve Marines in the Khe Sanh campaign. He com-

manded a platoon which helped detect enemy ambushes, boobytraps and caches of materials. Following his discharge, he joined GE.

"From the standpoint of personnel work, my military service was useful. Since joining GE, I've hired a number of Vietnam vets."



Thomas Regan: 20 years of Army experience

GE health technician Thomas F. Regan says he sees a lot of Vietnam vets coming in for new-hire physicals. He identifies with them. Before joining Columbia, Md.'s Relations and Utilities Operation in 1972, he had served in Vietnam—and earlier in his military career, in Korea and twice in Germany. Regan was an Army "lifer" who retired after 20 years.

Between 1968 and 1969, Sgt. 1. C. Regan served as a medic in Can Tho, and as ward master for a hospital in Pleiku. "I saw a lot of tragedy," he recalls, "but my time there was made worthwhile by working with Montagnard villagers. They weren't Vietnamese— it wasn't their fight, but they became victims of the conflict, and lived in poverty and terror."

Regan adds: "I joined the Army when I was 17, and grew up in the military. GE recognized the medical skills I'd learned and provided me with a smooth transition into civilian life."

### Anthony Skecte: 'combat really tested me'

"In Nam, I was a long-range sniper and adviser for a combat platoon. We were a 'hot-pursuit' combat team. If anybody needed help, we'd drop down from choppers. We wore few military patches—nothing that said U.S. Army—in case of enemy capture."

Schenectady's Anthony J. Skeete is discussing his war experience. A production control supervisor for Large Steam Turbine-Generator Division, he served 18 months in Vietnam as an Army sergeant. He's now a second lieutenant in the Army Reserve.

"After service, in 1974, I rejoined GE as an hourly worker and attended Union College on the GI Bill. I graduated in 1976, picked up my diploma on a Saturday, and the next Monday enrolled in GE's Manufacturing Development Program. I'm an MDP graduate as of May 24."

Skeete describes the war's effect on him: "Combat really tested me. It taught me to take the initiative."



#### Peter Oksala: 'lessons should be retained'

When Utica's L. Peter Oksala left the military in 1976, he was an Air Force captain with eight years of service. His Southeast Asia tour of duty lasted from 1971-73. "As a Strategic Air Command navigator, I frequently went into the combat area to support operations. Later, I was stationed in Thailand as a weapons systems operator. I flew 120 missions over Vietnam, Laos and Cambodia."

Oksala works as an employee relations specialist with Aero-

space Electronic Systems Department. "My 'dislocation' from the service back into civilian life was minimal. I already had a bachelor's degree, and on the GI Bill earned a master's degree from Syracuse University. GE hired me after I graduated."

His thoughts on Vietnam? "All of a sudden, movies, TV and books are talking about the war. A sense of bitterness about Vietnam won't do any good—but lessons learned should be retained."



#### Angel Gutierrez: 'Marines gave me the drive'

In battle after battle, machine-gunner Angel A. Gutierrez earned a reputation as a protector of the Marines who fought beside him. "My buddies nicknamed me 'The Angel of the 500-Round Burst'," he says, "but I saw it more as doing my job when guys' lives were depending on it." His job? Searchand-destroy missions in Da Nang, Chu Lai and other combat zones.

"Fighting the Viet Cong was a 13-month survival course," recalls Gutierrez. "When I came back to the States, I trained other Marines—hard, I knew what would be expected of them."

In 1969, following his discharge, Gutierrez joined GE Nuclear Energy Products Division's Control and Instrumentation Department in San Jose. "I had no civilian job skills, but the Marines had given me drive. I told my foreman I intended to make it in this Company." Today, he works as a unit manager of shop operations in the same manufacturing area.



### Stephen Kotski puts war and wounds behind him

"You're always hearing about the guy who got shot up in Vietnam, came back disabled, and still can't find a decent job. I could be one of them, but I'm not. All things considered, I feel pretty lucky."

Stephen A. Kotski, a tool grinder for Pittsfield's Power Transformer Department, talks without bitterness about his 1966 Marine Corps experience in Chu Lai. "I was 18. We were pinned down by heavy enemy fire along



Highway 1. With a heavy ammo pack on my back, I had to do a kind of duckwalk backward to avoid being hit. I stepped on a land mine and lost both legs, below the knees."

Kotski was treated and discharged. He attended a college preparatory school on the GI Bill. "I was accepted at a college, but decided I wanted to get back into the real world—earn money on a job. I thought my chances would be slim. But the Veterans Administration put me in touch with GE in 1968—and GE hired me."

13

## Monographs



Leaders see GE products. Saudi Arabia's petroleum minister, Shaikh Zaki Yamani (left), and the Amir of Bah-

rain, Shaikh Isa bin Sulman Al Khalifa, visit GE stand during this spring's Middle East Oil Show in Bahrain. Conducting them through the GE exhibit are Costas Sfikas (center right), manager—Africa/Middle East Sales Operation, and Ghazar Bagdassarian, manager—Gulf States Sales Operation.

General Electric displayed products ranging from gas turbines for pipeline pumping to FM portable two-way radios designed to help coordinate pipeline crews. The new VaporTran® transformer— which has special application in the Middle East because of the region's high temperatures— also was shown.

More than 450 companies participated in the oil show. Nine GE product and service businesses took part, as well as various GE affiliates.

Helping Smokey Bear. The U.S. Forestry Service needed new lanterns for foresters' hard hats, so the sheltered workshop of Hartford, Conn.'s Easter Seal Rehabilitation Center offered to produce them. But first—miniature bulbs for the lanterns had to be designed.

GE answered the call. Last fall, for the project, Cleveland's Miniature Lamp Department designed a new 2.65-volt lamp powered by a lithium battery. States workshop manager William Zesut: "We're already assembling 3000 lanterns under the initial contract, hope to get more Government orders, and also sell them commercially."

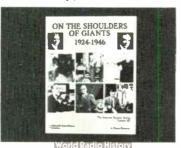
The project, funded by a \$35,000 General Services Administration contract, is the first product development contract awarded to a U.S. rehabilitation facility.



New GE photo history. A new book on GE and its people has come off the press. Titled On the Shoulders of Giants. 1924-1946, this soft-covered, 84-page publication is the third in a series of photo histories produced by The Elfun Society's Hall of History. Over 60,000 copies of the first two volumes have been sold—The Edison Era, 1876-1892, and The Stein-

metz Era, 1892-1923.

Copies of the book, available for \$2.95, can be obtained by writing Hall of History, GE R&D Center, K-1, P.O. Box 8, Schenectady, N.Y. 12301.



Honors. Five GE employees have been elected members of the National Academy of Engineering. They are: John G. Anderson, Large Transformer Technical Resources Operation, Pittsfield; VP Donald C. Berkey, Energy Systems and Technology Division, Stamford, Conn.; VP A. Philip Bray, Nuclear Energy Projects Division, San Jose; Leon K. Kirch-

Expanding GECC's fleet. The largest tanker ever built in the Western hemisphere, the 398,000-deadweight-ton *UST Atlantic*, has been acquired by General Electric Credit Corporation for \$91.6 million. The 1187-foot-long vessel has been chartered to Shell Oil under a long-term lease and will operate between the Middle East and international refineries.

The UST Atlantic is the 13th vessel in the GECC tanker fleet—giving GECC more cargo capacity than any other U.S.



flag tanker owner.

GECC acquired its first tanker six years ago, and with the addition of the *Atlantic*, now has an aggregate tanker tonnage of 2,130,000 deadweight tons. The 13 vessels have a combined carrying capacity of 15.3 million barrels of oil—enough to heat approximately 400,000 average American homes for a year.

Most of the GECC tanker fleet is employed under longterm leases by U.S. oil companies engaged in transporting Alaskan oil to U.S. ports.

GECC has a commitment to acquire the *Atlantic's* sister ship, the 398,000-dwt *UST Pacific*, later this year. The vessel now is under construction at Newport News, Va.

Union negotiations underway. Since May 1, bargaining sessions of great interest to many GE employees have been conducted in two packed conference rooms at New York City's Essex House. Shown: GE representatives (top of picture) in discussion with the International Union of Electrical, Radio and Machine Workers (IUE) representatives.

Elsewhere in the building, other members of the GE bargaining committee have been meeting with the United Electrical, Radio and Machine Workers of America (UE) representatives.

"During this negotiation period, as in the past, lack of detailed public announcements is beneficial," states Fairfield's Frank P. Doyle, VP—Corporate Employee Relations Operation. "It allows the Company and unions to work out solutions without hardening their positions through press releases or

statements to the media."

Unions represent about 120,000, or 75% of the Company's hourly employees, and 45% of its 284,000 U.S. employees. Contracts with most unions expire on June 30.



mayer, Electric Utility Systems Engineering Department, Schenectady; and Robert H. Wentorf, Jr., R&D Center, Schenectady.

• GE's Reginald H. Jones was ranked first among five company board chairmen considered "most influential" in the field of business. The selection was made by 1439 "American decision-makers" polled in an annual *U.S. News and World Report* leadership survey.

• Schenectady's Dr. Roland W. Schmitt, VP—Corporate Research and Development, has been named to the Energy Research Advisory Board of the U.S. Department of Energy.

• The American Marketing Association's 1979 Achievement Award will be presented June 4 to GE for "being both beacon and backbone to the marketing discipline." The award will be accepted by GE Vice Chairman W. David Dance.

• Peter R. Levin, manager— International Trade Policy Development, was honored by the Electronics Industries Association with a plaque recognizing his leadership as Chairman of the EIA's International Business Council.





The western U.S. lifestyle appeals to GE engineer Lin Lin Herbert and her husband Frank. The San Jose couple values time away from their jobs to pursue favorite pastimes such as hiking with their son Patrick (above). At home, Frank enjoys his woodworking hobby as Lin Lin takes care of some household chores with a GE washer and dryer (left). Back on the go again, the Herberts soak up a little California sunshine (below).



### THE BUSINESSES

## The 30-year-old consumers

General Electric businesses see opportunities ahead as 65 million 'boom babies' grow up with lifestyles and incomes that say 'buy!'

They go all-out to maximize self-expression—and minimize time that gets in their way of achieving it. And they have the money to buy the lifestyle they want. They're an exciting new breed of consumers who are making themselves heard in the marketplace. General Electric is listening.

"California weather makes you want to keep on the go! The mountains were perfect for daypacking today," reflects Lin Lin Herbert, a plant computer programming engineer for the GE Nuclear Energy Products Division. Near a new Oriental rug in the Herberts' San Jose living room rest two well-worn pairs of hiking boots. Lin Lin's husband Frank, a sales representative for Colgate-Palmolive Company, nods agreement about the day as he pours two glasses of a yet-untried vintage of a Napa Valley wine. Tenmonth-old Patrick Herbert apparently enjoyed the outing. too. He's sleeping soundly.

Twenty-five hundred miles away, in Philadelphia, Larry and Helen Arrington move to the beat of a different drum. "We enjoy living the good life!" Larry shouts above the frenzied, thumping music that bounces from the walls of a popular downtown discothèque. He's a structural analysis engineer for the GE Re-entry and Environmental Systems Division. Helen is a junior-high-school mathematics teacher. "This place is one of our favorites!" she says. Bathed in rhythmic swirls of rainbow colors from a ceiling of neon chaser-lights, the couple moves onto the dance floor and blends smoothly into the boogie-oogie-oogieing crowd.

Pictured on these and the following pages, the Herberts and Arringtons are seen by GE as typical of young consumers in and near the 30-year-old age bracket. They belong to the era—between World War II and 1960—in which 65 million "boom babies" were born.

The "age lump" of which these couples are a part makes up nearly one-third of the nation's total population—and has influenced virtually every segment of society as it thundered through successive life cycles. It crammed hospital nurseries, packed public schools and glutted job markets. Now, the demographic tidal wave of postwar babies is making another giant splash—as a grown-up, ready-to-spend generation of affluent consumers.

Observes Senior VP John F. Welch, sector executive—Consumer Products and Services Sector: "The greatest popula-(continued next page)





tion bulge in American history is about to enter the prime buying ages of 25-44. We can already predict some of the effects."

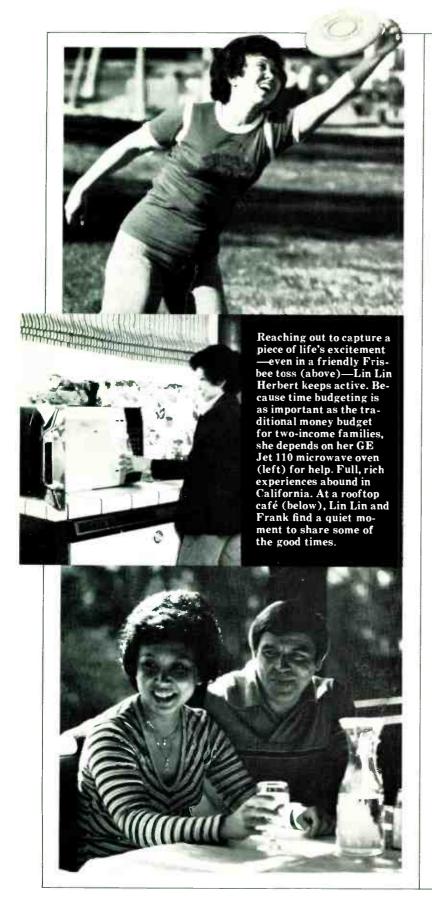
Welch notes that there are going to be more new households than ever before. "By 1990, 21 million households will have been formed that don't exist today. The biggest checkpoint in consumer buying is around age 30. And the biggest boom ever in 30-year-old consumers is coming in the next ten years. Of those 65 million postwar youngsters, a mere 10 million have reached that crucial age of 30. We have 55 million to go!"

Based just on the numbers of people in this market, many GE businesses should benefit. There will be an increasing call for major appliances, housewares, audio products, plastics applications, medical systems, power delivery apparatus, transportation equipment, electronic components—and a host of services that support these and other technologies.

But the conspicuous size of this buying public accounts for only part of an unprecedented product-demand juncture for GE businesses.

The two-paycheck revolution, for example, is shattering the traditional American household stereotype on which many retailing decisions were based ten, five and even two years ago. The once "typical" family portrait—the breadwinner with a wife who stays home to care for dependent children—is found in less than 15% of U.S. households today.

On Fridays, the Arringtons' stylish, contemporary suburban apartment may serve only as a "stopping off" place between

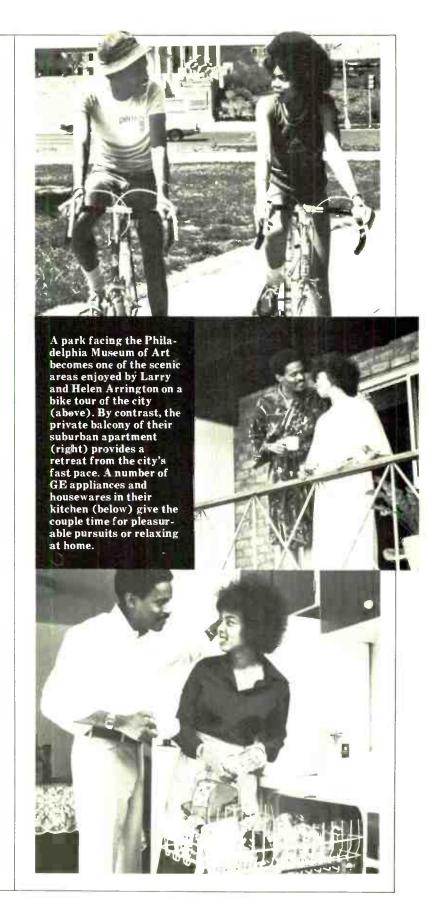


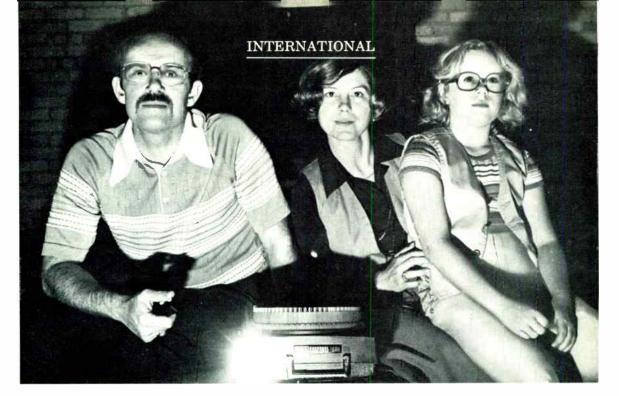
the end of the week's work and the beginning of Philadelphia's night-life activities. The couple also enjoys entertaining friends in what Larry Arrington calls "cosmopolitan fashion." As for striking a balance between the time they spend together and the time they devote to their jobs, Helen Arrington explains: "We like the work we're doing. Larry and I have talked about starting a family some day. But right now, we both have our careers to think about."

There are 24 million families in which both partners hold jobs—pushing the number of families with two wage-earners ahead of those where there is only a single worker. The steady influx of working wives into the job market has catapulted many families into upper earnings brackets. Already, the "\$25,000-and-over family" has become the fastest-rising line on household-income charts.

And with higher discretionary incomes, 30-year-olds are able to indulge themselves. Focus-on-self values—a search for self-fulfillment and heightened individuality—are prevalent among this new consumer group.

Says Lin Lin Herbert: "Frank and I are very much into the idea of family, but we decided to put off having a child of our own until last year. As a result, we've been able to buy many of the things we want, and to take vacations in Europe and Japan over the past few years. Our future plans call for a trip to China or Australia. Closer to home, we like to water ski, snow ski and camp in the Sierras. Because we both work, time for 'fun things' is always at a premium. But-because we both work- we can afford the little conveniences that help us find that time!"





## Planning an overseas trip?

GE employees offer advice for 'first-timers' going abroad.

If you're about to embark on that "dream" vacation, or you've just been assigned your first overseas business trip, a few travel tips from those "in the know" may come in handy. The *Monogram* asked three General Electric people—one who vacationed abroad with his family for the first time last summer, another a veteran of business trips around the world, and the third a GE physician—to share some "helpful hints."

The first overseas adventure for Carroll G. "Bud" Waltz, his wife Carolyn, and daughter Laura, was a ten-day charter to London. "It was a fantastic education!" exclaims Waltz, unit manager of assembly for Columbia, Md.'s Range Manufacturing Operation. "The biggest travel lesson we learned—for our *next* trip over there—is to pace ourselves a little better. Since there's so much to do, there's a great temptation to overdo everything."

Why choose London as a foreign-travel primer? "Because Laura was only eight, we felt it would be good to visit a country where she could observe a different lifestyle, but still understand the language." Waltz explains. "We had an excellent travel agent. Many people steer clear of agents because they think they're expensive. Actually, since agents collect from

the carriers and hotels, you pay them nothing at all."

To visit England, an American needs only a passport. But Waltz suggests: "Apply for your passport well in advance! The Maryland State Office wouldn't accept my birth certificate because of a minor spelling error in my first name. They wanted my baptism certificate instead, but then refused that because it was written in 'unreadable' script. I had to return to my church for a new one."

What's common to Londoners required some adjustments for the Waltzes. "At intersections there were poles topped with orange globes that flashed to give pedestrians the right-of-way. Still, it was strange to look right—instead of left—when crossing a street. And it wasn't unusual to see cars parked on the sidewalks."

Meals brought surprises, too. "Laura ordered a 'familiar' entree: 'Maryland fried chicken.' It turned out to be baked—with a honey-pineapple glaze. Pancakes resembled unleavened bread. Coffee was very strong—and thick. The pubs opened and closed three or four times a day, and served soft drinks and beer at room temperature."

There was, however, one dining treat Waltz recommends highly: "If you go to London, don't

◆ Relaxing at home, the Waltz family relives their summer vacation in England by viewing their slides.

miss an Elizabethan Feast! Hosts dressed in authentic Elizabethan costumes escort you to long tables inside an old castle, and for four hours serve you fare typical of the period—such as 'fish the King caught today.' Dancers, minstrels and jesters encourage you to join in their fun. It was a well-done production—and a most memorable experience!"

Sixty-five trips to the Orient, and 30 trips to Western Europe—about half of which included travel in Eastern European countries—have seasoned New York's Raymond A. York, general manager—International Licensing Department, to the "ins" and "outs" of conducting business overseas.

On getting there: "You can save a lot of time by sizing up the lines at customs or passport offices. Avoid inefficient Government bureaucrats doing the inspections. And *don't* stand behind an obviously disorganized family with overstuffed baggage!"

On language: "If the American on business abroad has only an elementary grasp of another language, he or she should resist trying to speak it. This can drag down a conversation to a preschool level—where the American's foreign language skills probably are. For business purposes, it's best to hire a good translator. But be cautious! Make sure the translator has no vested interest in the other person's side. In countries

Ready to depart on Company business again, veteran traveler Ray York inventories his travel case.



where GE has offices, the Company can supply a translator, or find one for you."

On what to expect: "The more conservative socialist states present the greatest challenge. When you go to Russia, your entire travel plan has to be spelled out in detail on your visa. Every appointment must be made for you—by invitation only. The Russian government won't tell you ahead of time what hotel you'll stay in. The only thing you're promised is a room somewhere in the city you've requested to visit. I've been on trips where our GE group was split up in three different hotels.

"In Western Europe, it's normal to hop from country to country in a day. This means planning ahead on laundry. It generally pays to take some quick-dry garments with you. Also, keep a sensible supply of money ready for use in different countries. I usually have 20 different foreign currencies on hand to save time and the bother of exchange.

"In Japan, you don't tip a bellhop. Americans who do try to tip will find their money refused or quickly pocketed after the bellhop has looked around to see if anyone is watching. If you stay at a 'traditional' Japanese inn, don't plan on using soap *inside* the tub. Japanese bathrooms are designed with tile floors with drains. You wash outside the tub, *then* enter the water. The idea stems from the old custom of keeping the water clean so other bathers can use it when you're done. I once hosted a Japanese friend in my own home. My bathroom is 'traditional' U.S.—no drain in the floor. But my friend followed customary Japanese bathing procedures—and flooded my bathroom!"

Guarding your health during the trip is important. Dr. T. Dexter Lenci of GE's Corporate Medical Operation helps Fairfield, Conn., employees prepare for overseas travel. He notes: "Prevention is the name of the game. Learn about foods you should avoid, diseases prevalent in the area you're visiting, and immunizations and preventive medications needed. We review our travelers' itineraries and medical records, then plan accordingly. We also recommend travel kits containing medicines that may be required."

In general, Dr. Lenci advises travelers not to purchase over-the-counter medication in foreign countries. Prescriptions, however, can be filled at drug counters in many major cities. "If a traveler follows certain guidelines," Dr. Lenci explains, "a visit may usually be concluded with relatively little risk to health."

## **GE + Storno**

## a new integrated drive on mobile radio markets

Thirty-two years ago a young Danish electronics engineer named Erik Petersen saw an opportunity: apply World War II advances in communications to the fledgling art of mobile radio; the results might produce a new industry for Denmark.

Petersen won financial backing for his venture from the venerable Great Northern Telegraf Company in Denmark and named the company "Storno" after the Danish word for "great" and an abbreviation of "Northern." Today, Storno A/S is Europe's leading producer of mobile radios and a majority-owned affiliate of General Electric.

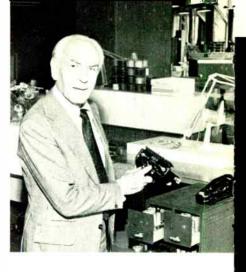
When a *Monogram* reporter talked recently with him in Copenhagen, Petersen described himself as "semiretired" but was still bubbling with enthusiasm about Storno. "The business began modestly, with only 12 employees at the end of our first year," he recalled. "In those early days we tried all sorts of electronics communications gear. But then we saw that the real opportunity was the original one, so we got rid of everything else and concentrated on mobile radio systems. Today, Storno has over 2,400 employees serving customers in more than 50 countries throughout the world."

The 1976 decision to affiliate with General Electric wasn't a

case of a giant gobbling up a little company, Petersen makes clear. "We were determined to throw in our lot with some more broadly based company so that we could better finance our growth and improve our technology. We preferred General Electric."

Over the years, General Electric had earned worldwide recognition as a prominent mobile radio supplier by successfully handling tough systems projects, both domestically and in selected international markets. With major plants in Lynchburg, Va., and Florence, S.C., as well as smaller assembly operations in other countries, General Electric was analyzing increased mobile radio opportunities abroad and studying ways to serve them most effectively.

The importance of Storno to General Electric strategic plans for the mobile radio business is emphasized by GE VP Christopher T. Kastner, general manager of the Mobile Communications Business Division: "The two businesses represent a very good match. Storno is the European leader, with strong thrusts in other international markets. While General Electric's strength is primarily in the U.S., which is the largest single market for FM mobile radio, there is a



substantial worldwide presence generated by export marketing activities based in Lynchburg. Integration of the two operations made very good business sense."

For Kastner, "integration" is the key word. Under his command, integration of GE and Storno is proceeding on a broad scale: "We don't mean integration just of product lines—although that's highly important. We believe the real competitive thrust for these businesses will come from coordination also in organization, R&D, engineering, manufacturing, purchasing, finance—the whole range of business functions."

Organizationally, integration has been forwarded by putting both the U.S. Mobile Radio Department and Storno under Donald J. Meyers, general manager—Mobile Communications Operations. "It was determined at the outset," Mevers says, "that the Danish company would continue to market its product under its wellrespected Storno name. Furthermore, its management would continue to play a strong role in the operation as well as in General Electric's progress worldwide. GE has lived up to those commitments and, today, the cooperative spirit that has been generated between the two organizations is all that anyone could ask."

(continued on page 24)



Far left: Erik Petersen, a principal in founding Storno in 1947, contrasts compact present-day radiotelephone equipment with early Storno unit.

■ Strategic leadership for integrated GE-Storno drive on worldwide mobile radio markets: Peter Vange, left, Storno president; GE VP Chris Kastner, general manager—Mobile Communications Business Division; and Don Meyers, general manager—GE Mobile Communications Operations.



New GE Century<sup>3</sup> H FM and Stornophone<sup>6</sup> 5000 mobile radio line, representing joint development by GE and Storno engineers, gives both organizations a new impact in large Business and Industry market.

Storno has more than 350,000 radiotelephones in service. Examples: Stornophone units in use by rescue team (right) and harbor patrol (bottom).





Integration does have to overcome difficult problems, Lynchburg-based Meyers observes: "There are strong technical differences to be resolved -mobile radio in Europe generally uses lower power transmission and has to be more compact, for instance, than in the U.S. Also, to be fully integrated, we must jointly optimize our production resources, develop common sources of components, and rationalize our marketing and distribution systems. We're accomplishing these things by establishing a strong communications interchange, with English as the agreed-on common language and the metric system as the common denominator in measurement. Every other month an integration team gets together either in Lynchburg or in Copenhagen. Weekly there are conference telephone calls. And we maintain a frequent exchange of technical details, production schedules and the like. The whole integration process has moved rapidly and effectively. It's not a euphemism to say that this is a happy marriage."

The first fruits of integration are already apparent, Meyers points out:

- The first product line based on the technologies of both General Electric and Storno is on the market—the Century® II line marketed by GE and the Stornophone® 5000 line sold by Storno. "We feel that this product is better than either partner could have achieved alone," says Meyers. "It gives us a strong new entry into the lower-priced end of the large and exploding B and I (Business and Industry) segment of the world market."
- Storno's winning of a new



A technical innovator with a long record of "firsts," Storno was selected to install the fully automatic radiotelephone system linking operations at the Charles de Gaulle Airport serving Paris.

order to supply the USSR with mobile radio systems for the 1980 Olympic Games was aided by GE's Moscow office. Says Meyers: "Storno management acknowledges that to have GE people in Moscow helping them was a big advantage. Storno won this order against a large competitive field following a complex negotiation by Peter O. Vange, Storno president and general manager."

• The first U.S. example of Storno and GE product integration is an 800 MHz "trunking" system installed by GE at the Sears Tower in Chicago. Explains Meyers: "This advanced system, the first to become operative, overcomes radio-channel congestion by automatically selecting unused channels. It makes use of both GE and Storno products for individual transmissions optimizing frequency utilization."

A talk with President Vange explains how this Danish company has established so strong a position throughout Europe. "From the first, Storno management knew that Denmark

itself provided too small a business base—today some 90% of our sales go to export customers. Yet in the leading economies of Europe there are mobile radio companies that concentrate almost entirely on their home markets. The Storno strategy was to develop an affiliate in each of these countries that would compete against the local producer. So, at present, we have strong competitive affiliates in the UK. France, Germany and Sweden, and we serve other markets by exports from these affiliates. You might say we've become number one in Europe by being a strong number two in a number of different countries."

This strategy helps clarify how Storno products have been selected by prominent organizations throughout Europe: "Our UK affiliate has won orders, as an example, from Scotland Yard. The German affiliate supplies systems for communications on the autobahns, at Hamburg harbor and for the coordination of German electric power stations. So it goes-Storno does business on a local basis, geared to national customer needs, even as we also maintain international goals and perspectives."

Vange, a Danish electromechanical engineer, joined Storno in 1971 and has headed the company since 1974. He has seen Storno come back from a loss position to a solid earnings performance in recent years. The outlook? "With forecasts of an economic slowdown being pushed further into the future, we've gotten off to a very good start in terms of new orders thus far in 1979. Our objective is to bring Storno results up to GE averages. We expect in 1979 to make further progress toward that goal."

## **GE 'anti' volunteers**

Employees are devoting off-hours to such causes as *anti-*delinquency, -suicide, -alcoholism, -illiteracy, -ageism and -blindness.

### Byron Bair: 'someone needs to listen'

"We receive many urgent calls: from the suicide-prone, child abusers, alcoholics, drug addicts, battered wives, runaways, unwed mothers. We operate a round-the-clock telephone 'hotline' for persons with crises. No matter what the callers say, we try to help them find solutions for themselves. We're trained listeners—not counselors."

Syracuse's Byron L. Bair (right), is describing "Contact", a volunteer-operated "hotline" program that exists in 80 locations nationwide. Bair, a project engineer with Solid State Applications Operation (SSAO), joined the Syracuse program four years ago. He's now a hotline trainer—helping instruct others on how to



handle emergency calls. John P. Hanna, SSAO's manager, is a past president of the local group. "We teach volunteers to subdue their personal feelings about callers' problems," says Bair. "No matter what the caller says, a sympathetic voice responds."

## Charles Hart delivers eyes on emergency basis

It began as a local Lions Club project. Stanford University Medical Center in California needed cornea transplants delivered on a rush basis. Now, San Jose's Charles W. Hart (left) has carried more than 100 donor eyes to recipients, traveling more than 10,000 miles to do so.

"I have compassion for people with physical disabilities, particularly sight problems," says Hart, manager—Control and Instrumentation Panel Engineering with Nuclear Energy Business Group. "If a cornea transplant can help someone see, heaven and earth should be moved to give that person sight!" Hart serves on the board of directors of the Santa



Clara Valley Blind Center, which runs programs for the blind and sight-impaired. He also serves on the board of Variety Audio, Inc., a

volunteer group which provides "oral books" on tape to blind people as well as to persons with psychological problems.

### Joyce West: veteran of volunteer social work

In 1971, as a member of Owensboro, Ky.'s Citizens Who Care, Inc., she helped organize a home for runaway girls and others with chronic family problems—and later served two years as its president. She has worked eight years with Kentucky's Department of Human Resources, preparing social histories for placement of juvenile offenders. She now counsels adults with problems—including newlyweds and parents of children in trouble.

States Joyce S. West, a quality control tester with Tube Products Department: "Volunteers often can reach people—particularly kids—that 'paid' people can't. Kids know you're helping because you care." She notes: "A frequent problem of juvenile offenders is alcoholism in the home. The only way kids sometimes can handle this is to walk out the door. They must be separated from serious offenders to be helped."





### Jeffrey Jackson tutors English and math

"Many of the kids I've tutored are now my friends," remarks San Jose's Jeffrey L. Jackson (center), a cash management specialist with Nuclear Energy Finance Operation. "I recall one boy I tutored while I was attending college. He had a reading deficiency, but he also needed to know someone cared about him. We made a breakthrough in both areas. Long after I stopped tutoring him, the boy was calling to say how well he was doing."

Jackson joined GE in 1974 in San Jose and, soon after, began tutoring high school students in English and math. He later solicited other tutors among local GE engineers, finance people, secretaries and hourly people. "Many students need only short-term tutoring—just enough to get them over the hump," Jackson says. "Others require long-term help. If teachers and parents can't devote long hours to help them, they simply fail. Their problems mushroom."

### Thomas Pillow helps youth on probation

"Their crimes include petty larceny and illegal possession of firearms. Their attitude is positive—they want to accomplish something, but don't know how. Their parents either are unwilling, or don't know how, to steer them toward vocational counseling."

The speaker? Cleveland's Thomas E. Pillow, shop operations manager for Miniature Lamp Department. "In 1977, a local probation officer reached me through the Junior Achievement

organization," notes Pillow. "She asked me to counsel a young law-breaker who wanted to become an engineer. I've since counseled four other such young men."

Continues Pillow: "Steady employment is the biggest problem young lawbreakers have. Their jobs fail, but they don't know why. No one has told them to report to work on time or to dress presentably." He adds: "I'm not a criminologist—I simply listen to them and offer tips."



#### Merced Marcano: fighting alcohol and drug abuse

"Our community has a problem—especially among its young people. Gangs roam the streets, and there is widespread alcohol and drug abuse. Two years ago, we began holding neighborhood meetings to help young people. We worked with a local group, Hogar Hispano ["Spanish Home"], which was trying to open a clinic to treat alcoholics and drug addicts. The clinic's now open, has operated its alcohol rehabilitation program for a year, and in May opened its

doors to drug addicts."

The spokesman: Chicago's Merced Marcano (right), a facilities mechanic with Range Manufacturing Department. He recently was elected president of Hogar Hispano. "Our rehabilitation program is different from most—local citizens organized and financed it, and many of our counselors are former alcoholics and drug addicts. They know the kinds of problems, and what treatment can help."



### Vincent McManus: 'Ageism has become a hot social issue'

"Out of 80,000 people in Lynn, Mass., more than 15,000 are over age 60. Unfortunately, as a political group, they're not very forceful. They don't always know how to lobby for what they need."

So observes Vincent H.
McManus (center), manager—
Community Programs with Lynn
Relations Operation. As chairman
of the Lynn Council on Aging's
housing committee, McManus has
directed a three-year effort to
create new housing units for
elderly residents. The result is

Caggiano Plaza, a \$2.5-million, high-rise building of 116 units overlooking Lynn's Common.

Another of McManus' Council duties entails overseeing a program for the elderly which includes Meals on Wheels and social, medical and legal services. Other beneficiaries of his work include low-income persons, minorities, the mentally retarded and the physically handicapped. "Ageism is a hot social topic. It's tough for retired persons to cope with double-digit inflation."



## Organization Changes

## CONSUMER PRODUCTS AND SERVICES SECTOR

Newton L. Chamberlain, VP and General Manager—Residential Financing Department. GECC

David D. Ekedahl, VP and General Manager—Home Products Financing Department, GECC

Thomas A. Jones, VP and General Manager—Industrial Equipment Financing Department, GECC

Bernard P. Long, VP and General Manager—Commercial Loan Financing Department, GECC

Gary C. Wendt, VP and General Manager— Leasing and Industrial Loan Financing Department, GECC

## INDUSTRIAL PRODUCTS AND COMPONENTS SECTOR

Donald B. Dickerman, Jr., General Manager—Electronic Components Sales Department Harold C. Robertson, General Manager—DC Motor and Generator Department

### INTERNATIONAL SECTOR

William R. C. Blundell, President and Chief Executive Officer—Canadian Appliance Manufacturing Company Limited (CAMCO) D. Forrest Rankine, VP—Apparatus and Heavy Machinery Division, CGE William D. Rooney, VP—International Projects, CGE

POWER SYSTEMS SECTOR
Edward W. Springer elected a Vice President

TECHNICAL SYSTEMS AND MATERIALS SECTOR

**Donald W. Shirey, General Manager—Noryl** Products Department

In theatrical productions, one's creative Muse can be tested as playwright, director, actor—even stage manager.



### GE employees whose paths cross at the footlights

The cast: three GE men with a flair for Schenectady community theatre work (1 to r):

Allan D. Foster. He translated church choir experience into lead roles in such musicals as "Brigadoon" and "West Side Story"— and a 20-year run of theatre interest. Foster is manager of Schenectady Gas Turbine Division's Materials Engineering Unit.

Jack D. Byrne. He was a theatre usher in high school—he's a director and actor today. His first directing success in 1952—"Born Yesterday"—began a long list of dramas, comedies and musicals in playbill credits. Byrne is a sales engineer for Industrial Sales Division's Defense Facilities Sales in Schenectady.

John W. "Bill" Hickman, in costume for Molière's "The Amorous Flea". Too short to follow the footsteps of basketball heroes, he turned to the arts. He has acted in dozens of shows from Neil Simon to Shakespeare. Hickman is manager—Resources Development and Administration for Albany's Advertising and Sales Promotion Operations.



### Paul Nixon: prominent voice in many musicals

Paul B. Nixon's favorite musical role: Don Quixote in "Man of La Mancha". "At least once in every actor's career, he should play Don Quixote. This chivalrous hero was unrealistic, but he saw beauty in everybody—and because he did, was able to get them to conform to his vision of them."

Above, Nixon plays his newest role, as Pooh-Bah in "The Mikado", a recent production of Pittsfield, Mass.'s Berkshire Lyric Theatre. A repair, forecasting and

budgets planner with Ordnance Systems Department, he made his theatrical début in 1960. Among his other acting credits: "Jesus Christ, Superstar", "1776", "Our Town", "Brigadoon", "The King and I", "Carnival", "Of Thee I Sing", "Carousel", "The Music Man" and "Oklahoma".

Next year, Nixon will be president of Town Players of Pittsfield, Inc. His one complaint about acting? "Rehearsal time always seems too short!"

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# The Company thespians







### Bob Boggs: director as well as actor

"When I met the famous film director, Franco Zeffirelli ["The Champ"], he was stage director for the Dallas Civic Opera Company. The year was 1958. I was stationed with the Army in Dallas, and sang in various opera company productions. Working with Zeffirelli taught me a great deal about the finer points of staging."

Stamford, Conn.'s Robert B.
Boggs is describing his early
theatre experience. Now audiovisual communications manager
with Advertising and Sales Promotion Operations, Boggs has
acted in productions since his college days. He's been president of
both the Schenectady Civic Players and Schenectady Light Opera
Company—and in the Stamford
area, has directed productions of
the Connecticut Playmakers, New
Canaan Town Players and Ethel
Kweskin Sterling Barn Theatre.

His favorite musica! to direct? "I'd say 'Godspell'. It made me reassess my values and beliefs."

### Virginia Cassil: veteran of vaudeville writes plays

Virginia I. Cassil's theatre interest stems from her vaudevillian days. "Playing small circuits in the East, I was a combination actress/hat check girl/waitress/usher. At night, I sometimes slept in church pews." She later graduated to ingénue and characteractress roles in summer stock and repertory theatre, and ultimately appeared in two Broadway shows, "Angels Don't Kiss" and "The Devil Has a Velvet Touch."

Cassil—who retired in 1972 as a stenographer with Los Angeles' Industrial Sales Division—is also a playwright. She has written eight plays, including a historical drama, a mystery, and plays treating psychic phenomena and abortion. Her play, La Negliger, is performed in mime, and was recently a runner-up in the Theatre Arts Corporation's annual playwriting contest. Above, she works with actors at Play-back Players Theatre in Sierra Madre, California.

#### Pete Scalzo finds backstage work has its rewards

Peter F. Scalzo began his backstage work with Syracuse's Pompeiian Players 30 years ago. "Each year, we stage a popular Broadway show—often using the original Broadway scenery, which we transport from New York. If it isn't available, we hire a Broadway designer to design new sets."

Scalzo, a Heavy Military Equipment Department subcontract manager, is responsible for all scenery. He supervises the theatre crew which builds, paints and transports sets—and also supervises lighting and sound.

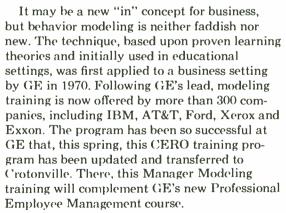
Scalzo recalls a funny incident: "We were doing 'The Music Man'. The crew was supposed to pull a backstage curtain so we could roll a piano onto the set. But someone pulled the wrong curtain. We couldn't move the piano. Meanwhile, time is passing and the audience begins to titter. Finally, the right curtain opens, we start to move the piano, and find ourselves staring at the audience!"

# Behavior modeling

Can you improve your interpersonal skills by learning from a role-model? A General Electric psychologist says it's a technique that works.

By Thomas D. Hollmann, Ph.D.

Corporate Employee
Relations Operation is
responsible for General
Electric's applied behavioral science research
and the development of
new programs to improve managerial effectiveness. The author, an
industrial psychologist,
has worked in CERO's Personnel Research
function for more than five years.



What is behavior modeling? Briefly, it involves the use of videotaped demonstrations of how managers can successfully conduct specific discussions with their employees, followed by an opportunity to practice similar discussions with other course participants. Better manager/employee relationships and increased motivation are the "payoffs."

The approach is straightforward. For each discussion—such as a performance review or consideration of salary action—participants receive a set of about six "learning points." They demonstrate a specified sequence of statements and questions which a manager should cover in the conversation. The learning points serve as general guidelines which can be adapted to a manager's individual style.

After discussing the learning points, participants see a brief videotape of a manager applying the learning points in a discussion with an employee. The videotape serves as an example, or model—hence the name, behavior modeling. Finally—and most crucial to the program—participants practice the learning points with other participants who assume the role of "employees." Instructors provide appropriate feedback and elicit class response to the practice.

The primary goal of General Electric's Manager Modeling course is to broaden a manager's "behavioral repertoire"—that is, to teach managers new ways to handle discussions which they may have had difficulties with in the past. The training stresses some very basic tenets:

- protect or enhance the employee's self-esteem;
- maximize involvement through two-way communication;
- focus on behavior, not personality;
- solve problems rather than establish blame.

The course benefits employees as well as managers, since employees experience greater involvement and receive better feedback on their performance.

Research has verified the effectiveness of GE's Manager Modeling course. In a study comparing trained and untrained managers, impartial judges—not knowing who had been trained—rated trained managers higher in accomplishing their objectives in several manager/employee discussions. Even more indicative of the course's success is that trained managers, four months after the training, were rated even higher. This reveals that managers used the skills taught in this course and, with continued practice, improved over time.

Since 1971, GE's Foreman Modeling program has helped plant foremen in more than 80 GE operations to work more effectively with their employees. Beginning in 1975, the Manager Modeling program has been successfully implemented in more than 60 domestic and overseas operations. This program has been expanded to include discussion modules which focus on the development of entry-level professional em-

ployees. Presently, Crotonville is training GE people from various operating components to instruct the updated course for local managers.

GE emphasis on behavior modeling is reaffirmed by recent national studies. According to a 1978 Work in America Institute symposium, improving both productivity and the quality of working life in the 1980s will demand better use of human resources and better management of the work force. The Institute's call for improved manager employee communications is supported by research. For example:

- A recent National Science Foundation review of work-improvement projects concluded that providing information and feedback to individuals about their work and organization has a big impact on productivity.
- A five-year project by Teleometrics International recently found that high-achieving man-

agers show substantial concern for people, communicate openly, and allow subordinates to participate in decision-making.

In addition, surveys of exempt employees in GE, and a study of changing attitudes and values of GE's entry-level professional employees, indicate an increased need among employees for such things as:

- involvement in job-relevant decisions;
- feedback on performance and job opportunities;
- recognition for individual contribution;
- managerial responsiveness to employee concerns.

All of this points to the need for greater managerial skill—as opposed to muscle—in handling many critical one-on-one discussions with employees. Teaching the behavioral skills necessary for success in those discussions is the objective of Manager Modeling.



Managers watch a videotaped demonstration of a manager/employee discussion—then practice the "learning points" with other managers who serve as "employees."

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