



**GENERAL  ELECTRIC**  
**Monogram**  
SEPTEMBER-OCTOBER 1975

**DELIVERY TO DULUTH**  
GE's HVDC pioneering

Plus: DISC, GATT and all that;  
The \$70 handshake;  
How to wear a Government hat

# Opening up world trade


Code-like acronyms provide a key  
to international business  
that is both free and fair.

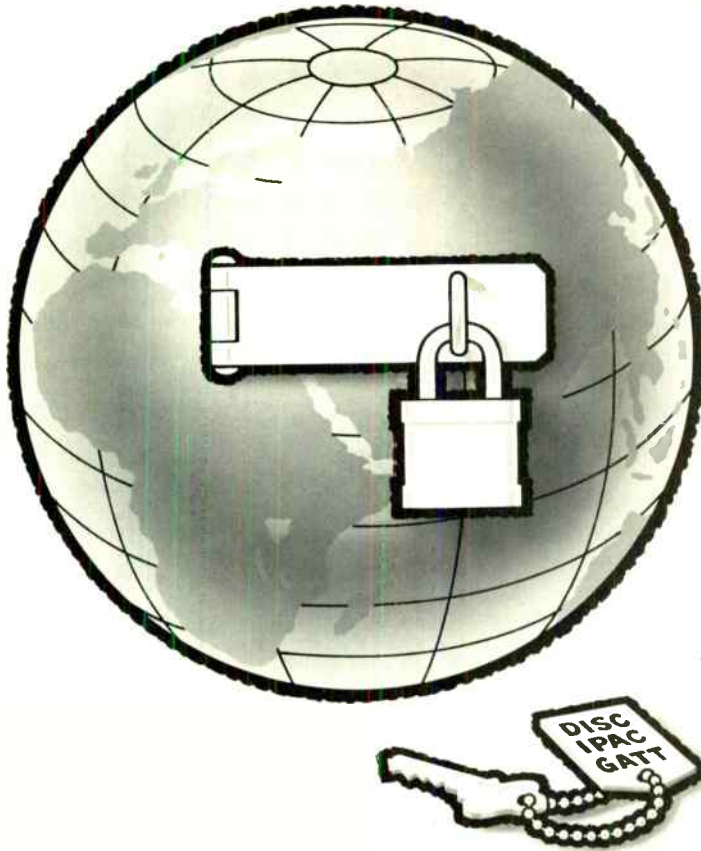
Suddenly, international business has become very important to the United States. Where once the country's income from exports of goods and services and from foreign investment could be deprecated as an inconsequential fringe around the great American market, these sources of income now account for 10% of the U.S. Gross National Product. And export-related jobs have countered the recessionary cycle by growing to 4.2 million in the first quarter of 1975, compared with 3.5 million in the final quarter of 1973.

As one reflection of this increased importance, press reports have begun to bristle with

the special phrases and shorthand acronyms that were once the preserve of a few specialists in international trade. The implication is clear: anyone wanting to understand the forces shaping the U.S. economy today must become familiar with new concepts and new terms.

DISC, for example. The acronym stands for Domestic International Sales Corporations. These originated four years ago when Congress, concerned about the deterioration of the U.S. balance of trade, took a lesson from other trading nations and established a tax incentive to increase U.S. exports. Companies that form DISCs may defer a portion of their income

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<p style="text-align: center;"><b>On the cover</b></p> <p>The nighttime harbor at Duluth, Minn. A new GE technology will soon be transporting power for these lights more than 450 miles. Read "Delivery to Duluth" on page 18.</p>	<p style="text-align: center;"><b>Contents</b></p> <p>THE COMPANY ..... 2-17                      Opening up world trade / Steinmetz awards / Accounting for inflation / Project Golf Ball / DIAL COMM / Lynn makes trashpower work / Saving oil in Baltimore / Monographs / Most peripatetic photographer</p> <p>THE BUSINESSES ..... 18-23                      Delivery to Duluth / Turning medical diagnostics inside out</p> <p>PEOPLE ..... 24-27                      The \$70 handshake / Organization changes / For women only</p> <p>PERSPECTIVES ..... 28-31                      Government business: exchanging hats</p>	
<p>The Monogram's purpose is to keep its readers informed on General Electric activities so that they may more effectively represent the Company in its relationships with the public. It is published bi-monthly by Corporate Public Relations Operation—Douglas S. Moore, Vice President. Editorial Supervision is by David W. Burke, Manager, Public Relations Programs, and J. Hervie Hauffer, Manager, Corporate Editorial Communications. Request permission to reprint articles from the Monogram Editor, Fairfield, Connecticut 06431. Copyright 1975, General Electric Company.</p>		



taxes on export profits, provided they plow such deferred taxes back into export-developing activities.

Before anyone can yawn, however, take a look at what DISC means in terms of the economic lifeblood of money and jobs. That's what GE's Chairman, Reginald H. Jones, did recently in an article published by the *New York Times*.

The GE Chairman was seeking not just to explain DISC but to fight for its survival. The DISC program "is threatened with repeal," he wrote. "And there are pressures to increase the tax burdens of American companies that have foreign subsidiaries despite the critical role that these overseas bases play in the battle for export orders."

Such changes, he said, "would place heavy additional cost burdens on United States companies that have to compete around the globe for job-creating export business."

Chairman Jones analyzed what has happened to U.S. exports with DISC in the picture. He offered documentation from GE's own experience: "The big increase in export busi-

ness began in 1971 when the DISC incentive was enacted. In that year, General Electric's merchandise exports from our United States factories amounted to \$741 million. In 1974, they were \$1.8 billion—an increase of more than a billion dollars in three short years."

What did this increase mean in terms of jobs? Said Jones: "We have just completed an analysis of GE employment in the United States. We found that 36,475 of the Company's employees in this country worked on export-related jobs in 1974, either in manufacturing or in supporting assignments. This was 12% of our total domestic employment. GE exports also provided, by careful estimate, some 43,800 jobs in supplier firms."

The GE record paralleled the national experience. The present 10% of US GNP that derives from international trade amounted, in dollar terms, to \$140 billion in 1974, up from \$66 billion, or 6% of GNP, in 1971.

"It would seem," in Chairman Jones' view, "that with exports now looming so large in our nation's employment picture, Congress would be considering new ways to encourage our ex-

(continued next page)



port industries. But—to the contrary—in the current climate of hostility against ‘multi-national’ corporations, which are the chief exporting companies of the United States, there are many in Congress who favor tax changes that would damage our export capabilities.”

His opposition was blunt: “Without DISC, General Electric would undoubtedly have to cut back its export business. Extend this to other exporters: If the DISC provisions were eliminated at a time when business is in a real capital crunch, as it is now, American exports—and the millions of jobs dependent on them—would decline quickly.”

Thus, matters that seem peripheral quickly become “issues that affect the whole nation.”

It’s the same with GATT. This is the abbreviation for the General Agreement on Tariffs and Trade. In the past, GATT meant negotiations that droned on in faraway places, attracting minor press attention. Today, in recognition of international trade’s increasing relevance, the trend is toward greater prominence for GATT.

A talk with GE experts Peter Levin, manager of International Trade Policy Development for the International and Canadian Group, and Valda E. Wells, consultant—International Trade Policy Development, underscores a number of the critical issues at stake in the new series of GATT meetings (dubbed the Tokyo Round because of a 1963 meeting in Tokyo which laid the groundwork for the present Geneva sessions).

One principal issue: whether trade will move toward greater liberalization or back toward tighter protectionism.

GE experts are aware of the necessity for enforcing GATT’s Code of Behavior in order to protect U.S. industry and its employees against unfair trade practices. But overall, Levin makes clear, GE favors trade liberalization—genuinely open commerce between nations, with tariffs reduced and non-tariff barriers relaxed.

The reason? “Because a free atmosphere rewards efficiency, and both the U.S. in general, and GE in particular, are efficient on an overall basis. With free access to the world market, U.S. employment will grow, not shrink. The alternative—protectionism—means continued high inefficiencies in society. We in the U.S. aren’t going to enlarge our share of the world’s trading pie through restrictions. Our best hope is to cooperate with other nations in enlarging the size of the pie.”



Trade experts Peter Levin and Valda Wells.

Levin is keenly aware of the opposition. “Many people will be there for what they can get—to contain economic benefits and shut out economic problems. That’s why we started doing our homework early—to come up with creative ways of helping the U.S. negotiators work toward world economic cooperation.”

ISACs represent one of the creative ways in which General Electric has been helping U.S. negotiators. In a radical departure from the past, the Trade Reform Act of 1974—the same bill which authorizes the U.S. to negotiate in the Tokyo Round—divides U.S. industry into 26 different product areas and sets up for each area an Industry Sector Advisory Committee (ISAC) to advise U.S. Special Trade Representative Frederick B. Dent on a consensus of that product area’s specific trading goals.

“We helped originate and worked hard for this idea,” Levin declares, “because we believe it to be a major advance in an organized approach to the negotiations—one where nobody gets lost in the shuffle. Agriculture and other topics have tended to dominate some past meetings, but world trade has quadrupled since the early 1960s and we know we can’t afford to ignore any areas.”

Having worked for support of ISAC provisions in the Trade Reform Act, GE people are now among those making major contributions to the formulation of ISAC positions for Special Trade Representative Dent.

GE’ers chaired two of the ISACs hammering out alternatives in meetings at the Commerce Department in Washington, D.C. Levin is chairman of ISAC-19 representing consumer electronic products and household appliances, and the late Wayne Rash, who was manager of Market Research for the Communications Systems Business Division in Lynchburg, Va., until his unexpected death in August, chaired ISAC-22, which represents the communications industry. While Rash’s successor has not been chosen as yet, his work provides a foundation for the ISAC’s progress. Eleven of the 26 ISACs include GE members.

Levin reports that his committee has achieved consensus in its policy suggestions to the U.S. negotiators. "Just to have the consumer durables sector recommend unified strategy options in a clear form for Dent's staff will be a major new source of strength for open trade positions at the GATT talks."

**IPAC, another acronym that is in the news**, is an overall advisory committee to negotiator Dent and is also manned by businessmen. Senior cousin to the ISACs, IPAC (Industry Policy Advisory Committee) is made up of senior industry leaders, including GE Vice Chairman Jack S. Parker. The 19 IPAC members meet regularly to provide Dent with an overview of industry opinion on world trade matters. The ISACs and the IPAC, sounding cumbersome and formal on paper, are impor-

tant vehicles through which information on jobs created by export business can reach government officials.

**Having come this far** with the drive for increased international trade, the Company will step up its efforts this fall as the GATT talks get underway and as Congress considers the future of DISC.

In fact, one reason Chairman Jones urges Congress to retain DISC is to strengthen the U.S. hand in GATT negotiations. U.S. negotiators, he notes, "will need all the bargaining weapons they can get."

"To drop DISC now, without getting some concession in exchange in the GATT trade negotiations," he says, "would be like unilateral disarmament in the battle for export business." ■

## GE's Steinmetz Award winners announced



Winners of the second biennial Steinmetz Awards, which honor one scientist or engineer from each of General Electric's nine operating Groups, are to receive their medals at a banquet at Corporate Headquarters in Fairfield on October 14.

Created in 1973, the awards are named for Charles Proteus Steinmetz, the GE engineer who achieved fame as the mathematical genius of the early electrical industry. They publicly recognize technical people whose contributions have had a significant impact on the Company as well as society.

This year's recipients of the engraved silver medals bearing the portrait of Steinmetz, who died 52 years ago, are:

- **Frederick W. Baumann**, Industrial and Power Delivery Group, for a series of electric motor innovations, including the linear induction motor and the aluminum redesign of a-c motors.
- **John Bochan**, Major Appliance Business Group, for amassing 89 patents for such home

laundry features as the Dispensall™ system, Filter-Flo®, Mini-Wash and the two-speed clutch.

- **Harold P. Bovenkerk**, Components and Materials Group, for developing several processes and improvements basic to the production of industrial synthetic diamonds.
- **Christopher T. Brook**, Special Systems and Products Group, for overall design of the transmission portion of Information Services' international network.
- **Burton P. Brown**, Aerospace Business Group, for his work on sophisticated radar antenna systems and for contributions as a member of several panels of the President's Science Advisory Committee.
- **Antal Csicsatka**, Consumer Products Group, chiefly for heading the team that developed the FM stereophonic broadcasting method that has been accepted as an industry standard.
- **Clarence E. Danforth**, Aircraft Engine Group, for a series of advances in aeromechanics, including development of blade stress and vibration analysis as a jet engine design tool.
- **Jacques A. Desbaillets**, International and Canadian Group, for achievements in the design of hydraulic turbines, such as the 820,000-horsepower Grand Coulee units, the world's largest and most powerful.
- **I. Birger Johnson**, Power Generation Business Group, for his work in the field of high-voltage electric power transmission, especially on surge phenomena.



**VP-Finance Al Way (left) checks inflation-proofed results of the Company with Paul Ode and Russell Graves, who led GE project to restate results in units of constant purchasing power.**

## Accounting for inflation

**GE joins in new project  
aimed at more realistic reporting  
of financial results**

“I got concerned at the end of 1973 when I saw inflation in the U.S. soaring up into the double-digits,” recalls Alva O. Way, VP-Finance. “I was reminded of my tour of duty with GE-Brazil during 1964 to 1967, when I saw inflation running rampant and learned how difficult it is to manage a business when the inflationary spiral gets out of hand.”

Way translated his concern into several forms of action aimed at helping business in general, and GE in particular, to adjust to the new levels of inflation that have beset the U.S. economy.

The first activity was the formation of a Task Force, under the chairmanship of Charles V. Sheehan, now manager of the Group Finance Operation—Power Generation Business Group. The Task Force assessed the effect of inflation on the validity of the Company’s financial reporting.

Its report led, in turn, to a presentation to the Company’s Division General Managers and to the highly successful course, “Managing in an Inflationary Economy.”

The latest measure spurred by VP Way’s concern: GE’s voluntary participation in an industry-wide effort to re-interpret financial results in units of constant purchasing power.

“In the financial reports that business puts out today,” Way says, “we pretend that a dollar spent ten years ago is the same as a dollar spent today. We know that this isn’t so, but we sacrifice truth to the idea of consistency in using the dollar as a common measure. The project we’ve taken on, on a trial basis, can lead eventually to reporting both by the traditional units of money and by units of purchasing power.”

The effects can be salutary, in Way’s view. “One benefit would be a more accurate picture of what is happening to industry profits. In terms of money units, consistency has required industry to report what have looked like rising, record profits in past years. Whereas, the real profitability of American business has declined rapidly.”

One of the major reasons for this slide, says Way, has been under-depreciation of plant and equipment expenditures. “According to a government estimate, under-depreciation inflated the 1974 reported profits of industry by some \$14 billion.” An even more important factor in 1974: the impact of inflation on inventory profits: “Although many companies in 1974 took the step that GE took in 1954 by adopting LIFO (last in, first out) accounting for inventories to minimize the effects of inflation, it’s estimated that \$35 billion of last year’s reported profits by non-financial corporations represented illusory inventory profits.”

As a consequence, although corporations registered a 71% increase in profits since 1965, profits actually dropped by about 50%.

“This situation has a whole train of bad consequences,” Way believes. “For example, retained earnings after payment of dividends in 1974 were actually *negative* by nearly \$16 billion—industry paid out more in dividends than we made, in terms of real purchasing power. We in industry are, in reality, *decapitalizing* ourselves, and this leads to an insufficiency of cash flow and an



increasing reliance on debt financing.”

The voluntary project in which GE has agreed to participate is one organized by the Financial Accounting Standards Board. GE and other participants will submit, on a confidential basis, their results for 1972, '73 and '74, translated into units of constant purchasing power.

The GE program, directed by Paul H. Ode, Consultant—General Accounting, and Russell A. Graves, of the General Accounting Operation, has involved more than 150 operating components and the efforts of over 500 GE people.

The objective of the FASB activity is a new accounting standard for industry, specifying sup-

plementary reporting in units of general purchasing power. Says Al Way: “As long as this change is put into effect on an industry-wide basis, we give it our strong support. It will mean a new type of information that will help the users of financial statements come to a more accurate assessment of inflation’s effects. And by showing what is really happening to industry’s profits it could contribute to a better understanding, and an improved environment, for business. While the SEC and other organizations have proposed measures for dealing with inflation, we think the FASB proposal is the most fruitful approach to doing something *now*.”

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## Making cash flow faster

It’s all right to allow a few dollars or a few hundred dollars to stay “parked” in your pocket for a period of time. But when the amounts run to millions, every minute counts—because the cost of money, most commonly referred to as interest, starts to pile up. So it’s axiomatic in finance to handle money like a hot potato—the less time it’s in your hands or in transit, the more you make.

Earlier this year GE Supply and Corporate Treasury Operation came up with a new wrinkle in moving cash faster using Information Services Business Division’s newly developed system for Telephone Information Processing. TIP for short. TIP is the new talking computer service by which any TouchTone telephone in the U.S. can be used to enter data into the computer network. The user hears a synthesized computer-generated voice ask the right questions, confirm the cash amounts

entered and wish the user a pleasant day.

The TIP cash consolidation system has now been extended to Major Appliance and Distribution Support, Credit and Collection Operation. Additional applications are planned for other components that transfer cash from numerous collecting points to Corporate Treasury. This will free up many more millions of cash previously locked up. Before TIP the system generally used for concentrating cash was for local banks to notify the appropriate component of customer payments received, and the component would issue and mail a check to a New York bank. Now these banks dial the TIP number and report deposits directly into the MARK III network where the information can be immediately accessed in New York and the cash is made available to the Company.

The system has much business significance beyond the aspects of convenience. “A tightened time-frame for receivables is a very useful tool in the important task of managing cash flow,” says Ted C. Doty, Group Financial Manager for the Special Systems and Products Group. “The Company is continuing to concentrate on creative ways of improving cash flow by minimizing cash lock-up in receivables and inventories, for instance. Every business action impacts on either accumulating or using up cash. In fact, cash flow is just as an important a measurement of business performance as is income.” Doty is chairman of a Cash Management Task Force established by Vice President - Finance, Alva O. Way.

■



# Project Golf Ball... Plus 20



**Burton Brown and his high-powered radar**

In Syracuse, N.Y., there's a "now it can be told" spirit in the air these days as a group of GE employees look back on an important and exciting moment in their past.

After World War II, the future of radar, and of those employed in its development, was less than clear. Concerned, a group of GE radar specialists in Syracuse set themselves the task of looking ahead in radar technology. Specifically, they asked themselves whether radar could track, and warn of, the sort of ICBMs the Soviets could launch.

The problems were formidable. As Steinmetz Award winner Burton P. Brown (see p. 5), now a systems consultant with the Electronic Systems Division, recently explained it: "In the early 1950's, the state of the art allowed high-powered radar to spot an airplane 200 miles away. What we were proposing was a unit so powerful it could see a golf ball at the same range."

Hence "Project Golf Ball"—an intensive effort to re-examine the state of the art and come up with equipment that could take this quantum leap forward in radar technology.

Quickly, though, the project became more than an independent, academic effort. The GE group was assigned to design and build a powerful new radar—the AN/FPS-17 (XW-1)—capable of detecting ballistic missiles at ranges exceeding a thousand miles. Says Brown:

"It was a difficult practical challenge in terms of getting such a sophisticated system to work the way we proposed. There were plenty of people outside the Company who didn't think it was possible. Remember, at that time thousand-mile radar systems were unheard-of, and we were advocating one that could detect not an airplane but a missile."

Work began on the XW-1 in September of 1954. "The original timetable was two years," says Brown, "but the user couldn't wait that long, so we did the job in nine months."

Work was organized using a "program management" approach, reporting directly to the department general manager. "Our group was self-sufficient, and its organization was a first of its kind," says Brown, "and a precedent used over and over in many parts of the military in dealing with industry."

Because the radar was a large system—it weighed 400 tons and its antenna was 175 feet high when built—a special military airlift was authorized to fly the equipment from Syracuse to the Middle East. The operation was second only to the Berlin airlift, according to Brown.

In June of 1955 the XW-1 was switched on and worked perfectly. "The whole system worked exactly as it was envisioned to work all the way from day one until it was turned off 20 years later," reports Brown. "The site has more than fulfilled its expectations. It's a very successful program."

After the tee-off of "Project Golf Ball," two more radars similar to the XW-1 were delivered by ESD, plus several large tracking radars for obtaining more precise Spacetrack data.

"These became the start of a series of long-range, ballistic missile defense radars which were produced by ESD," explains Kenneth O. Holmes, program manager-space surveillance. "These include the huge Ballistic Missile Early Warning System (BMEWS) radars for the Air Force and the Perimeter Acquisition Radar (PAR) for the U.S. Army. A Site Defense Radar (SDR) is under development."

To mark Project Golf Ball's twentieth anniversary, a small group of alumni held a low-key celebration in Syracuse recently. The gathering was short on confetti but long on nostalgia. And for the participants, there was the gratification of looking back on a project whose success had given GE a prominent position in radar technology and had led the way to thousands of manhours of work not only for the alumni but for many other GE people. **AV**



# DIAL COMM—

## New drive aims at making more efficient use of GE's telephone network

GE's DIAL COMM system saves the Company millions of dollars a year in telephone service costs. "But we still have a bill of more than \$1,500,000 a month for outside toll calls," according to Jack B. Wright, Manager of Telecommunications and Information Processing Operations (TIPO) in Schenectady.

Announcing a Company-wide drive to make more efficient use of DIAL COMM and cut down that toll call bill, Wright says that the GE telephone system "is designed to carry most of the long distance telephone traffic required to conduct the Company's business."

Many of the toll calls, he says, are made simply because employees get impatient when they get one or two busy signals on DIAL COMM, so they switch to an outside line. "The minute they do, the cost of that call is increased by 140%," says Wright.

DIAL COMM, the largest industrial telephone network in the world, provides desk-to-desk dialing for 125,000 telephones at 3100 GE locations in 450 cities in the U.S. and Canada—plus access to outside companies in about 7000 communities. It handles 2,500,000 calls each month.

Wright points out that there are some 6300 access lines connecting GE locations to three regional and 13 sectional DIAL COMM switching centers served by nearly 2000 trunk lines, and that "the system can handle 2100 simultaneous calls during the busiest periods—10-11:30 a.m. and 2:30-4 p.m. Obviously, you'll get fewer busy signals if you can plan your calls outside those peak hours."

And here are some other TIPO tips on how to use DIAL COMM efficiently and economically:

- Use it for business calls only—and, naturally, the shorter the call, the less it costs.
- Remember that if it's possible to call before 8 a.m. or after 5 p.m., there's an economic advantage. TIPO doesn't bill for DIAL COMM calls made before or after regular business hours at any GE location.

- Keep a record of DIAL COMM numbers for people you call often—and always leave your DIAL COMM number if the person you're calling is not there. Dialing a DIAL COMM operator to get someone's number ties up network time—and costs money.
- When you travel on Company business, use the "Special Long Distance Telephone Service" card (available from your DIAL COMM coordinator) to gain access to the system through local phone numbers in some 100 cities.
- Use tie lines whenever possible. They are leased by GE from the telephone company to provide inter-office service where there is especially heavy telephone traffic.

"We need the cooperation of every GE telephone user in order to slash that million-and-a-half monthly toll call bill," Wright says. "It can be done if *everyone* uses DIAL COMM properly and efficiently." ▲



At a demonstrator in Schenectady, TIPO Manager Jack B. Wright explains the DIAL COMM number plan.



Steam pipe over the Saugus River links GE plant with RESCO facility visible in background.

## Trashpower – Lynn makes it work

General Electric's River Works in Lynn, Massachusetts, has cut its fuel oil consumption nearly 60%—by using steam made from burning refuse. The new power source saves about 73,000 gallons of oil every day.

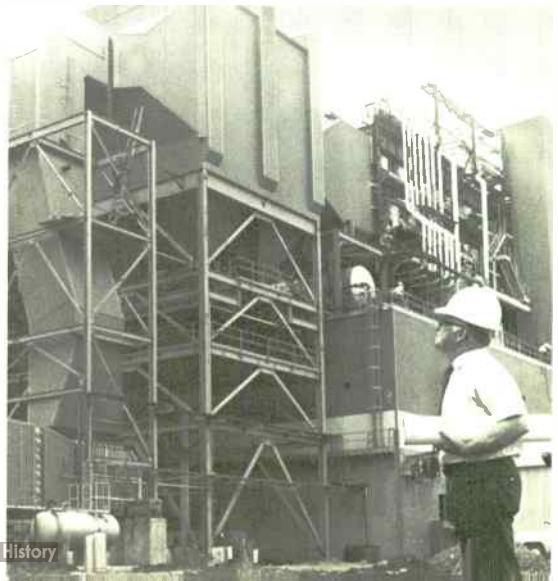
This boon to the Company as well as the environment was made possible by the opening, on October 1, of a privately financed, technologically sophisticated refuse-fired steam generator that produces superheated steam each day by burning approximately 1200 tons of trash and garbage produced by the 500,000 residents of a dozen nearby communities.

Dubbed RESCO (for Refuse Energy Systems Company), the \$35 million project is a joint venture of Wheelabrator-Frye Inc., a New Hampshire-based international engineering firm, and the M. DeMatteo Construction Co. RESCO is the largest refuse-to-energy project ever undertaken without government subsidy of any kind.

GE is buying all of the 825-degree F. steam RESCO produces and is using it for plant and

process heating, as well as for aircraft jet engine and steam turbine testing and for generating electricity. Some of the electricity is fed to the RESCO operation to power its lights and various conveyor-drive motors and controls that guide the burning rubbish through huge boilers. It is the first system in America to

RESCO's John Milo at pioneering facility.



make electricity from refuse alone.

Situated on the west bank of the Saugus River in Saugus, Mass., the facility is linked to the River Works, 300 yards away, by a 16-inch-diameter insulated steam line that arches 45 feet over the river, out of the way of lobster boats and pleasure craft that ply the waterway.

With stricter anti-pollution laws adding to the problems of solid waste disposal, area communities are eagerly signing 20-year contracts with RESCO, which charges a competitive \$13 per ton to dispose of refuse.

**Credit for holding the cost down** for participating communities, however, belongs to GE, according to John F. Milo, RESCO's general manager.

"If GE wasn't purchasing the steam, we'd have to charge the communities \$7 more per ton," he says. Milo, a 33-year GE veteran and former manager of the River Works Utility Operation, opted for early retirement last year in order to accept the RESCO job.

In addition to saving valuable oil, RESCO is environmentally attractive for another reason—it's *clean*. Electrostatic precipitators remove more than 97.5% of all particulate matter from the system.

"We don't even need stack-gas scrubbers because the system produces such dry exhaust," says Milo, adding that the 1800-degree F. operating temperature is low enough to eliminate the occurrence of oxides of nitrogen, yet high enough to consume all odors. Sulfur isn't a problem, he says, because it is not normally present in domestic refuse.

"Since 25% of the material fed into our boilers contains water, the only thing that goes out the stack is vapor," Milo explains. "And the only time it's visible is when the outside temperature drops below freezing—then you can see a clean white plume."

The sterile ash left behind, less than a tenth of the original volume of refuse, can be used as fill material at construction sites. The system reclaims some 60 tons of ferrous metals each day, and according to Milo, it is highly efficient, achieving a 73% conversion of refuse into energy under optimum conditions.

Using refuse-produced steam not only saves fuel oil—it also allowed the River Works to shut down a pair of old boilers instead of replacing them. Moreover, residential rubbish is one of America's most dependable sources of energy—so the Lynn plant is assured of an adequate supply of low-cost steam. **AW**



## Saving oil in Baltimore

What is the Mayor of Baltimore doing surrounded by oil barrels? He's helping to dramatize one of the main benefits deriving from the community's conversion from mercury-vapor street lights to General Electric high-pressure sodium (HPS) lights.

The benefit: an annual saving of 1.3 million gallons of oil.

"We find that our citizens feel safer when their streets are brightly lit," says Mayor William D. Schaefer (above, left), "and because of their inherent greater efficiency, HPS luminaires provide Baltimore's residents, shoppers and businessmen with twice as much light as comparable mercury-vapor units, without consuming a bit more electricity."

Now in its fourth year, the city's innovative lighting program called for installation of 5000 HPS street lights during 1975. By year's end, approximately one-third of Baltimore's 62,000 street lights will be HPS luminaires, making it the first major American city to employ the highly efficient lights in power ranges from 100 watts to 1000 watts.

Primary emphasis of this year's lighting conversion effort centers on completing installation of HPS units on all major traffic arteries and secondary routes.

In city-management circles, Baltimore has, over the years, acquired a reputation as a street lighting pioneer — the country's first gas street lamps were installed there in 1817.

"Increased safety and crime deterrence are direct benefits of our brighter streets, yet there has been no accompanying increase in operating cost," says Gene L. Neff (above, right), head of the city's Bureau of Utility Operations.

He also credits his fellow citizens for their enthusiastic support of street lighting bond issues, and expects that a \$1 million proposal to continue the relamping program will get a favorable reception at the polls in November. **AW**



# Monographs



Spirit of '76 calendar



Historical mappers



Salute to Black Americans



Bennington mugs

**Bicentennial salutes**—At GE, both the Company and its employees are continuing to come up with novel ways of recognizing the nation's Bicentennial. Here are some examples:

- **GE's 1976 Calendar**, soon to be available, has a distinct Bicentennial flavor.

A number of the photographs illustrate the three main themes featured on the calendar's cover: Heritage, celebrating the American past; Festival, honoring the arts; and Horizons, looking toward the nation's future.

The monthly date pages, below the illustrations, are trimmed with red, white and blue borders. And each monthly page has a Bicentennial footnote highlighting important events that occurred that month 200 years ago.

As customary, the back cover presents close-up pictures of GE's involvement with each of the monthly subjects shown inside.

Nearly 500,000 copies of the 1976 Calendar will be distributed to GE operations throughout the world during October.

- **The Company has offered to design and produce as many as 30,000 historical maps of Schenectady County in New York State at no charge for the County's Commission on the American Revolution Bicentennial.**

Public sale of the full-color maps, which depict the County's evolution from a large land purchase in 1661 to the present, will help finance Commission projects, including the establishment of a permanent Bicentennial memorial.

GE also proposes to distrib-

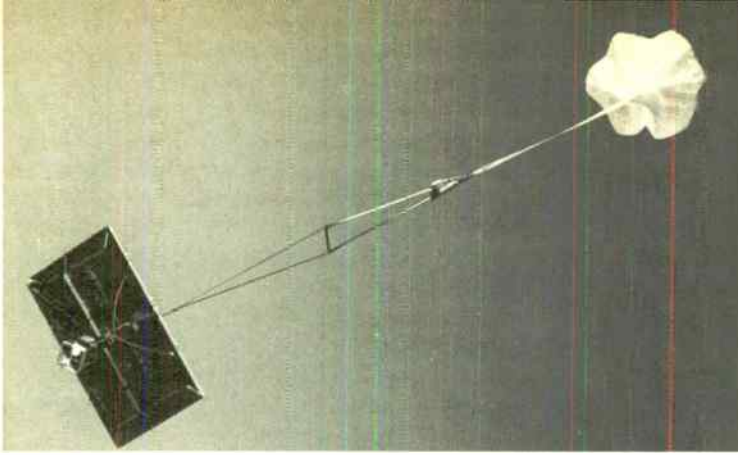
ute a free map to each classroom and library in the County. The maps will be available early next year and, at that time, can be purchased by employees and pensioners at one-half the public sale price.

- **Wallace Gaines**, an Oklahoma City district representative for the Wiring Device Business Department, has designed a project for a "Salute to Black Americans" with a series of personal bank checks he has created and is marketing. These picture some 48 celebrities and business leaders representing Black achievement in 12 different categories. Included in the categories are Black Women, Business and Professional Blacks, Blacks in Sports and Black Leaders of Civil Justice. The checks are similar to the scenic personal checks already on the market.

Gaines's goal is to receive 1000 orders from 1000 banks on a national level. To further the salute, one dollar of the purchase price for each order of 200 checks will go to charity.

- **Armament Systems Department of Burlington, Vermont**, has struck upon a unique way of saluting the achievers in its Bicentennial year motivation program called "GE Spirit of '76"—by awarding them Bennington Potters' Trigger Mugs emblazoned with the program's logo.

By special agreement with the Potters, whose largely hand-crafted designs have won worldwide acclaim and are on display at New York's Museum of Modern Art, only GE-ASD Achievers will receive the distinctive flared, trigger-handle mugs, which were made exclusively for the Department.



**Tracking the monopole—** Thin sheets of Lexan® polycarbonate and a particle-track etching process developed at the Corporate Research and Development Center are in the center of one of the most interesting scientific debates of the year.

In an experiment conducted by researchers from the University of California at Berkeley and the University of Houston, a balloon, carrying a package of Lexan sheets, photographic film and emulsion, hovered 130,000 feet above Sioux City, Iowa for 2½ days in 1973. Just recently, after an intensive effort to

identify all the tracks of cosmic particles left on the materials, physicists have discovered one track different from any seen before. The question: was this track caused by a magnetic monopole, the basic unit of magnetism, predicted and hunted by scientists for more than forty years?

Unlike the magnetism generated by a flow of electrons, which generates a two-pole magnetic field, this magnetic particle is thought to have a single polarity—hence the name monopole.

Some physicists are saying the track could have been left by a very heavy atomic nu-

cleus traveling near the speed of light. But the track also has many of the characteristics predicted for the monopole.

There is intensive interest at the Research and Development Center because the key experimental technique involved—particle-track etching—was originally discovered and developed there by Dr. Robert M. Walker (now a professor of physics at Washington University, St. Louis, Missouri), Dr. P. B. Price, (one of the scientists announcing the recent find and now a professor at University of California at Berkeley), and Dr. Robert M. Fleischer of the Physical Science Branch. The R&D Center is also among the many scientific institutions which have searched for the monopole.

Dr. Fleischer and other members of the GE R&D staff are already engaged in intensive study aimed at evaluating, confirming and extending the observations announced at Berkeley.

At a recent meeting at the National Academy of Sciences in Washington, D.C., GE Chairman Reg Jones (far right), who heads the National Advisory Council on Minorities in Engineering (NACME), heard glowing reports of the blue-ribbon council's successful nationwide efforts to increase the ranks of minority engineering students.

Shown with Jones are (from left): Percy Pierre, Howard University Dean of Engineering and Vice Chairman of the Committee on Minorities in Engineering; Laverne Jones, a sophomore engineering student at Illinois Institute of Technology; and Nate Thomas, the Institute's Director of Admissions.





## Most peripatetic photographer

Retrospective exhibit shows how Joe Brignolo has traveled the four corners of the earth in search of great GE pictures

Twelve years ago a free-lance photographer named Joseph B. Brignolo had an intriguing idea. For American editors who needed high-quality overseas photographs but didn't know how to get them, he'd provide a special service. He would go around the world each year, accepting

assignments along his route, and charge each editor only for the segment of his time and travels that he actually spent on a given assignment.

Now, 23 globe-circling junkets later, Brignolo can look back on the idea as markedly successful. Editors, assured of highly professional work at economical costs, have backed his projects to the extent that he now normally begins each trip with more than 30 different assignments in his log book.

General Electric became one of his clients in 1966, when he

took on an assignment for GE's annual report. Since then he has shot hundreds of rolls of film on GE subjects that have, as the examples on these pages testify, taken him all over the world. His work has appeared in numerous GE annual reports, the *GE Investor*, the GE calendar, the *Monogram* and other publications. Projected to kingsize proportions, Brignolo photos have illustrated GE share owner meetings and financial analyst reviews.

As for Brignolo himself, his idea to go international has made him an unusual observer



For the GE calendar, Brignolo has supplied a number of photos, including the two shown here. "One assignment was to shoot the GE-powered A300. With the use of a second aircraft I was able to catch the A300 banking over the ancient walled city of Carcassonne in Southern France." The aerial shot of Rio de Janeiro "was a stroke of luck," he recalls. "The commercial airliner I was on made a long, low approach to the city and I was able to shoot it through a plane window."



	Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5	6
APRIL 1974	7	8	9	10	11	12	13
	14	15	16	17	18	19	20

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2	3
MARCH 1973	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31





“On my first international assignment for General Electric in 1966, I took this picture of a GE gas turbine power plant in Majorca.”

of the world scene. He slips into and out of faraway cities such as Hong Kong or Bangkok as casually as New York commuters board the 7:05 train. It's common for him to jet into a country and then, to complete an assignment, resort to dugout canoes or, as in the case of a teak-logging story, elephant transport.

The benefits to GE have transcended bare economics. Out of his tireless travels, Joe Brignolo has contributed strong elements of quality and interest to GE's corporate communications.

“On one of about 20 trips I have taken to South America, I covered GE's Brazilian operations and tried to add colorful background coverage of the country itself. During the weekend, this park, the Praja de la Republica in São Paulo, turns into a big flea market—supplying people and color in a city that's bigger and more modern than most Americans realize.”

*(continued next page)*





Brignolo portfolio: interpretations of the GE world scene.

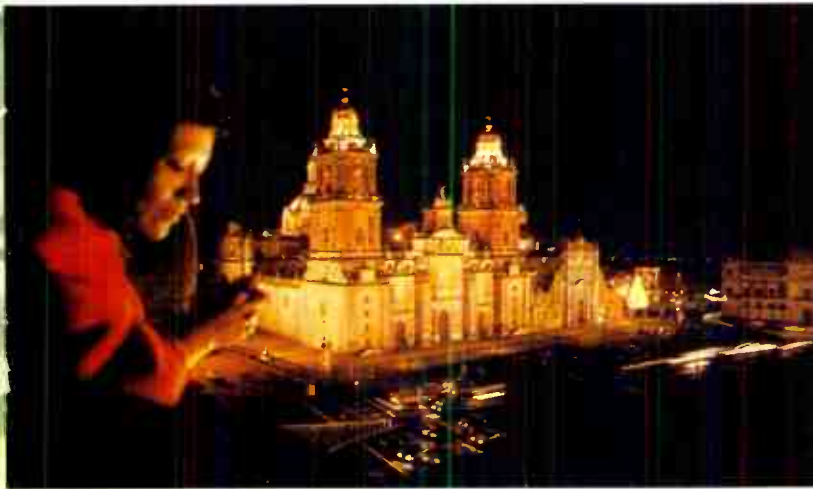


△  
“Brunei is a small country near the South China Sea. Its sole source of electric power is its complex of GE gas turbines. Here is the Sultan’s Mosque taken earlier in the day than shown on this year’s calendar.”



◁ “Angola, West Africa is a very mountainous and picturesque country. I had my share of footwork trying to get a good angle on an approaching GE diesel-electric locomotive. But the result is a strong example of how GE technologies aid developing countries.”

“I’ve photographed GE’s Reg Jones ▶ meeting with Belgium’s premier Leo Tindemans and GE’ers in Bahrain, Brazil and Mexico.”



△ “I took this picture of the National Cathedral in Mexico City from a hotel balcony while my Mexican-GE guide looked on.”



◁ “These huge cables are on an oil drilling platform off the coast of Bergen, Norway. This was part of my coverage of GE equipment used in oil operations. GE motors power the windlasses that lower the anchors suspended from these cables.”



◁ “Watching a GE diesel-electric locomotive cross Africa’s Victoria Falls was a truly impressive sight.”





△ At the delivery end of the nation's first solid-state HVDC system in Duluth, Minn., these giant bushings will lead the DC power into "valve hall" to be changed back to AC.

The supply end of the system ▷ is near Center, N.D., where vast lignite deposits are mined and used for generating AC power, which is turned into DC for the 450-mile trip to Duluth.



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# Delivery to Duluth

Or, if you can't bring coal to the generating plant,  
use GE HVDC technology  
to take the plant to the coal

At first glance the power plant nearing completion in this rolling North Dakota prairie country looks like any other large fossil-fueled generating station. There are the conveyor systems, the multi-story housing for turbine-generators, the cooling towers.

But a closer inspection shows that something unusual is happening here. The power that comes out of the plant doesn't go into a conventional switchyard and on to giant transmission towers. Instead, it goes into turret-like bushings projecting through the walls of a modest yellow steel-paneled building nearby. When it comes out the other side it will be fed into towers that seem too small and skimpy for the scale of the plant.

The answer is that power from this plant will be transmitted not as alternating current but as direct current—the kind you get from a flashlight battery. Only this DC power will measure a half-million volts and 1,000 amperes per conductor.

For this is the pioneering Square Butte Project that is introducing General Electric's solid-state High-Voltage DC (HVDC) technology on a large scale to the U.S.

An important aspect of Square Butte is that it demonstrates the feasibility of remote-site and "mine-mouth" generating stations—concepts favored by GE engineers for years. The effect of this application of GE's HVDC technology is to provide so efficient a means of electrical transmission that the generating station can be moved to the fuel source rather than the other way around.

For the situation in Minnesota and North Dakota, such a solution is ideal.

Duluth, Minnesota, a prospering city on the shores of Lake Superior, with fast-growing mining industries, needs more power. In the

woods 50 miles north of the city, giant electric motors are crushing taconite, a low-grade iron ore, 24 hours a day, consuming increasing amounts of power.

About 450 miles to the west, in the center of North Dakota, more coal is buried than in any other state. Only 50 feet beneath the rolling prairie are the world's largest reserves of lignite, best described as "adolescent coal" halfway in development between peat and real coal. The strategic question for Minnesota Power and Light, which serves the Duluth area: bring the lignite to their new plants or the new plants to the lignite? The solution: team up with North Dakota's Minnkota Electric Cooperative, already running a plant in the lignite fields, to build a new facility right next to the lignite and transport the power through the new HVDC process. In this way the idea for Square Butte Power Cooperative, a joint venture, was born two years ago. Minnkota Electric Cooperative will be operating the power plant for Square Butte, and MP&L will buy all the power.

The decision to bring the plant to the coal was not a hard one for MP&L. "Lignite is relatively moist and therefore costly to ship—35% of the shipment ends up being water," says MP&L Vice President for Corporate Planning Arend J. Sandbulte. "Then, too, an HVDC transmission line is a stable cost. The transportation cost of coal is likely to rise steeply over the years."

MP&L has succeeded in bringing the plant to the coal—so close that the HVDC power will take off for Duluth literally only about a mile from where its energy originated in the 11-foot-thick seams of lignite.

Square Butte surface mining is already underway to supply the existing generating

*(continued next page)*



plant, and the mined land is being carefully reclaimed. Leased from farmers rather than purchased, the land is first stripped of its rich black soil, which is put aside. A large dragline excavates to 40-60 feet to reach the coal, which is broken up and hauled to the generating plant in 120-ton trucks. After mining, the land is restored and replanted. Its productivity is checked for three years before the farmer gets it back. "In many cases the land is more productive than it was originally," says Sandbulte.

On the other end of the HVDC line, near Duluth, an almost identical terminal building will convert the DC back to alternating current. Already, 27-foot-high housings containing banks of the solid-state valves using thyristors have been put in place by Installation and Service Engineering Business Operations people. I&SE resident site managers at both ends of the project converse frequently, keeping an eye on the progress of the conversion terminals, the generating station and the hundreds of miles of transmission towers separating their sites. "This project is on time and we expect to apply the first test power to the system in September, 1976," says Lewis C. Ford, manager of Electrical and Electronic Projects Operation for I&SE.

Why use DC to do this job—moving as much power as the entire MP&L system used until five years ago? Jack L. Fink, Square Butte project manager and manager of HVDC Projects Operation for the Switchgear Equipment Business Division, cites some of the specific advantages:

- "DC transmission costs less. The narrower rights-of-way—19½ acres per mile instead of 30½—and fewer conductors—two DC aluminum wires will do the job of six AC conductors—all add up to a striking cost advantage for DC transmission if the power is transported a long distance."
- DC transmission is more environmentally acceptable. "We expect that smaller rights of way and fewer wires at Square Butte will begin to deescalate the trend toward bigger towers," says Fink. "It's especially nice to have these environmental benefits grow out of technology advances which are viable economically."
- DC transmission is more efficient. DC line losses are lower, a fact engineers have known for decades. Says Fink: "Thomas Edison, who always felt DC should be used to wire the nation anyway, would probably say, 'I told

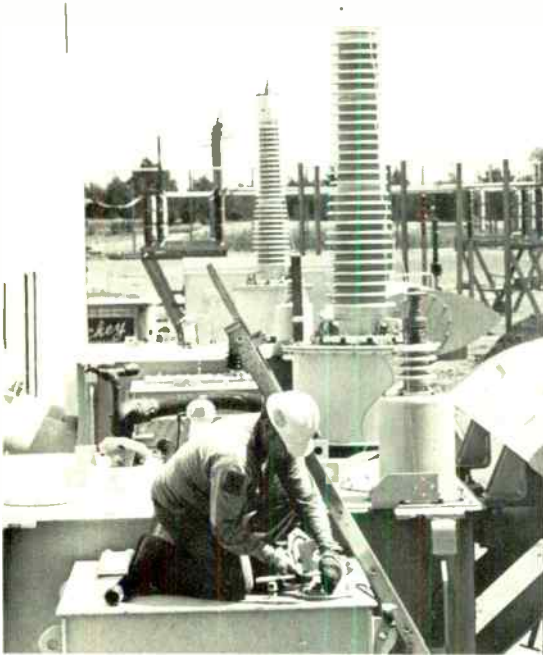


you so!' It is also an interesting fact," he adds, "that while AC current flows principally on the outside of a conductor, DC flows evenly through wires, allowing smaller diameters."

- DC transmission provides a natural buffer between distant AC power systems, which otherwise have to be locked together in perfect frequency synchronization in order to have them avoid "fighting each other," causing cascading blackouts.

"The advantages of DC transmission were always there," Fink notes. "What wasn't there was the assurance of reliability for conversion on that scale—until we proved our conversion system's 99%-plus availability at Eel River Crossing, New Brunswick, Canada three years ago." The Eel River HVDC project plugged Eastern Canada into the plentiful hydroelectric power generated in Labrador, linking two incompatible AC systems through a short 20-





**GE HVDC equipment, center, provides the energy link between North Dakota lignite, left, and Duluth, Minnesota, right, with its fast growing taconite iron ore industry nearby. Huge 3000 Hp GE electric motors are used to crush the taconite before smelting.**



foot DC bus connection.

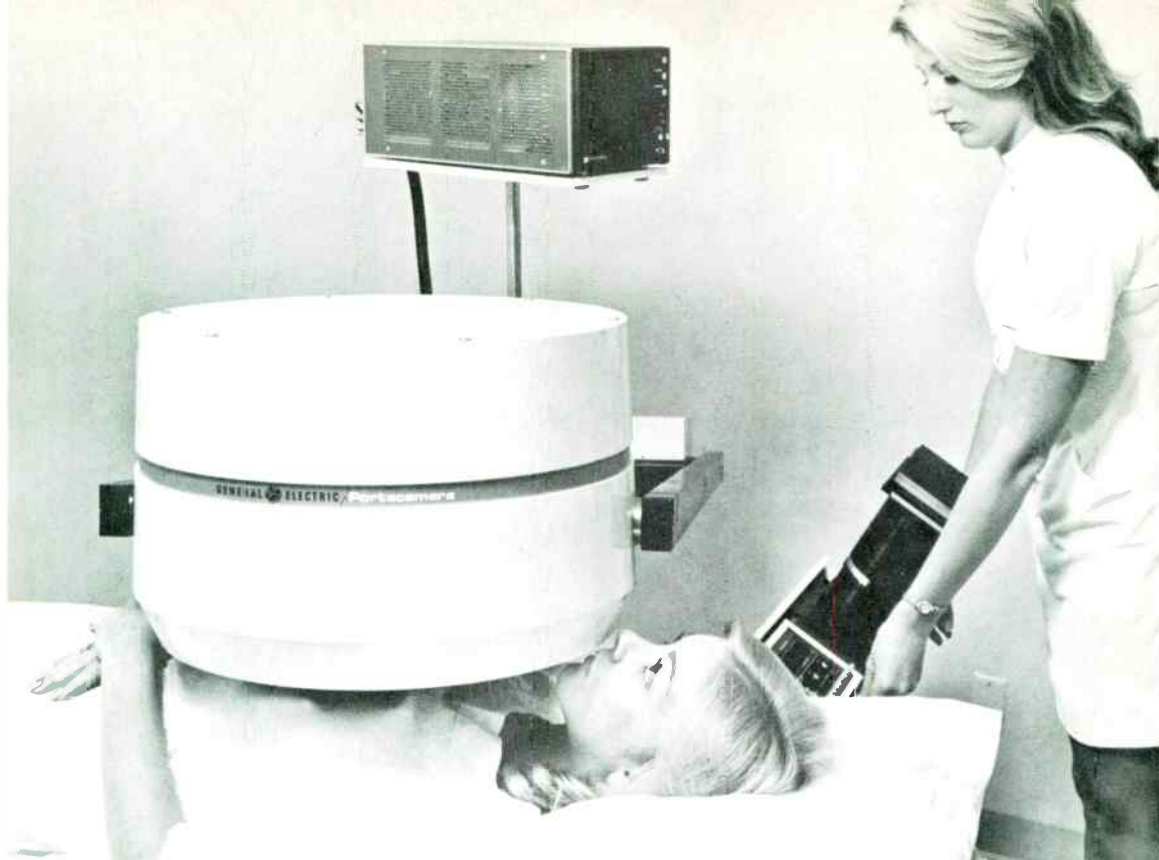
Now the benefits of long-distance HVDC transmission foreseen at Eel River are about to be given a 450-mile application.

The historic delivery to Duluth will do more than prove the concept and greatly increase the amount of power available to northeast Minnesota. It will bring utility visitors from across the country to see the pioneer U.S. application of solid state HVDC to remote-site generating and to contemplate the future of cooperative utility projects in the U.S. "We believe," says HVDC veteran Fink, "that if there is ever to be a truly national grid, or network, DC is the most practical way to hook it up."

In fact, GE's next HVDC project after Square Butte, already underway in Stegall, Nebraska, will be the first permanent link between the eastern and western power grid systems of the U.S.



**Jack L. Fink, Square Butte project manager for Switchgear Equipment Business Division: "HVDC is a happy blend of increased environmental acceptability and cost effectiveness."**



Models demonstrate GE's new nuclear PortaCamera.

## Nuclear medicine— it turns diagnosis “inside out”

Nuclear medicine, a new dimension in health care, is turning diagnostic procedures “inside out,” and General Electric has taken a major step forward in this exciting field by introducing a line of nuclear diagnostic cameras.

Unlike x-ray equipment, which aims a radiation beam *through* a patient's body to expose black-and-white film, GE's new gamma cameras detect and record rays emanating from *within* the body. These rays, generated by low-energy radioisotopes injected into the patient's bloodstream, are “counted” by the camera's sensitive detector and, when displayed via TV or film, can show entire cross-sections of the human body.

Radioisotopes tend to concentrate in tumors and certain organs, such as the brain, where tumors can be quickly and reliably located. And in heart examinations, the adequacy of blood flow through the heart tissue can be accurately determined—an invaluable aid in

cardiac care.

Unveiled at the annual meeting of the Society of Nuclear Medicine in Philadelphia, Medical Systems' line of nuclear, or gamma, cameras is proof of the Company's commitment to serving the field of medical electronics—a market which, with health care expenditures now totaling some 8% of the country's GNP, may well approach the \$2 billion mark by 1979.

GE's contribution to the technology of nuclear diagnostics is exemplified by the new UniCamera™. “By attaching a lightweight nuclear camera to a special overhead, telescoping arm originally designed for x-ray equipment, we were able to take the UniCamera from idea to marketable reality in just 60 days,” says Albert A. Fried, General Manager—Special Health Products Operation.

And the result is a unit that requires a minimum of space in the frequently congested hos-

pital and clinic locations where it is most likely to be installed.

“Presumably, a hospital will install its nuclear camera and x-ray equipment in the same room,” says VP Walter L. Robb, General Manager of the Medical Systems Division. “And institutions with cardiac care units will probably want our PortaCamera™, too.”

A portable version of UniCamera, the PortaCamera is the only fully mobile nuclear camera currently available. Less than half the size and weight of competitors’ fixed-location units, it is readily brought to the bedside of seriously ill patients anywhere in the hospital.

“Our basic business is serving the radiologists with innovative x-ray equipment,” says Robb, “but as diagnostic techniques expand into new areas of increasing technological sophistication, such as nuclear medicine, Medical Systems is equipped to expand its line to meet new market demands.”

GE sees the new technology of nuclear diagnostics as complementary to, rather than competitive with, its x-ray business, in which the Company has been a leader ever since Dr. William D. Coolidge, at the Research and Devel-

opment Center, invented the sophisticated x-ray tube still used as an industry model.

In VP Robb’s view, products for nuclear medicine will soon become, in terms of market participation, the fourth major element in GE’s Medical Systems line. First, of course, is x-ray equipment—GE is the nation’s leading manufacturer in this field. Second is the therapeutic instruments line, led by pacemakers and defibrillators (defibrillators are similar to pacemakers, but turn on only when the heart beats irregularly), but also including radiology equipment, electrosurgical instruments and physical therapy devices.

The third—and fastest-growing—segment of the Medical Systems business is patient monitoring equipment. Used to keep a close watch on high-risk patients’ vital signs—heart rate, blood pressure and oxygen levels, temperature and respiration, such equipment is finding increasing application in the intensive care units and emergency wards of hospitals all over the world.

And now there is a line of nuclear cameras, bringing GE solidly into the emerging era of nuclear medicine. **AV**



A display model of GE’s nuclear diagnostic PortaCamera is one of actor George Peppard’s (left) co-stars on NBC’s new TV series, “Doctors’ Hospital.” At right is Keith Collins, Medical Systems sales representative in Los Angeles, who is serving as the show’s technical advisor for scenes in which the PortaCamera appears.



# The \$70 handshake



Seventy dollars. That, says a McGraw-Hill study, is the average cost of a salesman's call on a customer or prospect. At that figure, the importance of making each call a successful one is obvious. Here's how some successful General Electric salesmen are working to make their sales calls count in today's uncertain economic climate.



**W**ith customers hesitant, and transportation and other costs rising steadily, this is the time for both the salesman and the sales manager to take a hard new look at what they're doing and how they

can do it better," says VP Kristian H. Christiansen. Now General Manager of the International Sales Division, VP Christiansen was previously General Manager of the Industrial Sales Division—a combination of assignments that qualifies him as GE's "top salesman."

In Christiansen's view, the key to improvement in a salesman is a fresh demonstration of professionalism. "Ever since the emergence of Willy Loman in the play 'Death of a Salesman', many people have had the idea that all a salesman needs is 'a shoeshine and a smile.' Being a successful GE salesman has always required more than that. And today it requires a *great deal* more."

Today's salesman, Christiansen says, must reinvigorate some of the things he learned during sales training—to really listen to and "read" potential customers, to detect buying signals, to use psychology and to communicate.

"A Willy Loman type wouldn't last very long with GE—if he ever got in at all. He simply would not qualify as a professional."

And what does Christiansen mean by "a professional?"

"To me, a professional is a person who works without a clock—spending whatever hours are necessary to get the job done. More importantly, the true professional has assiduously acquired the training and background necessary

to serve customers effectively. A professional salesman understands the importance of maintaining the Company's reputation for quality and service as the basis for his or her own success."

As for sales managers, Christiansen advises them to

"maintain an optimum balance of front-line sales people to back-up help, and maximize the use of non-personal selling aids as well. These things may seem very basic, but they're often overlooked, especially during the good times, when sales come more easily.

"By maintaining their sales organizations in a fine state of tune, I believe GE sales managers will find that when the real economic crunch comes, they are better equipped than their shortsighted competition to weather a period of economic distress."



**T**o make sales effort productive in times like these, we take a more selective

approach toward potential customers," says Charles T. Roemer, manager of ISD's OEM Eastern Sales District in Milburn, N.J.

Increased sales and reduced expenses, he believes, result from narrowing the field to bring high-potential prospects into sharper focus.

"Although we value all of our customers," says Roemer, "we've tried to increase our efficiency by concentrating on those prospects who are of the greatest importance to General Electric. We are keeping an eye on the growth customers

in an almost no-growth market situation.

"Now, more than ever before, GE sales people must be good listeners to discover what values are desired by potential customers. They must be able to recognize customers' needs and communicate them to the product department."

And Roemer adds: "No company, including GE, can survive long on one-time sales. We're trying to build client relationships substantial enough that these customers will continue to do business with us in the future."

**I**n this business, when you solve a problem, you make a sale," says William H. Welsh, a GE sales engineer who works out of the Industrial Sales Division's Meriden, Conn. office, selling everything from miniature push-buttons to large drive systems. "Customer problems—they're what turn me on. I go after every possible opportunity to help prospects over their engineering hurdles."

Although the economic climate has slowed the pace of industry in general, forcing many of his customers to operate on what Welsh calls a "hand-to-mouth" basis, he continues to rack up sales.

How? The answer lies in training and self-image. With

an electrical engineering degree and 27 years of GE sales experience, Welsh sees himself as a professional problem-solver—the essential interface between what the customer wants and the technical specifications GE needs to fill the order with the proper equipment. By knowledgeably playing this role, Welsh has seen his sales keep growing.

"Today, when customers (like the one at right in shirt-sleeves) are striving to wring maximum value out of limited budgets and are demanding much more service than they did a few years ago," he says, "the salesman and the company that provide the best solutions to customer problems will get the orders."





**I**'m available 24 hours a day if my customers have lamp problems—they all have my home telephone number," says Jerald L. Gold, who helps illuminate southern

New England on behalf of the GE Lamp Sales Department's Newton, Mass. office.

This 30-year-old salesman has worked all night setting up GE lamp displays in large retail stores. And more than a few retail merchandise managers, frantic because they ran short of lamps—one of their most profitable items, have called Gold, knowing that he'll get the lamps delivered, even if it's in the back seat of his own car.

In less than three years with the Company, he has helped GE outdistance formidable photolamp competition in his sales area, which includes several major discount store chains.

Coping not only with the recession but also with the

energy shortage, Gold finds that a willingness to "go that extra mile" for a customer often makes the difference between winning or losing a sale.

And winning sales is important to him, he says, because of all the people behind the products he sells. There are about 17,000 Lamp Division employees, but only 420 salesmen, so Gold figures that each salesman is responsible for the livelihood of some 40 people.

"When I'm on my way to a sales call, I can't help thinking about those 40 people whom I've never met but who, in a sense, depend on me for their jobs. It scares me. And it's certainly an element in making my every sales call more effective."

**S**elling is a lot like playing a demanding sport, because both activities instill a winning type of attitude in the participant—something a person can't have enough of these days," says James E. Traylor, a sales engineer for GE's Meter & Instrument Business Department in West Lynn, Massachusetts.

"Winning is a habit, you know, and I like to win whether it's a game or a sale—it hurts to lose."

Traylor, who joined the Company 4½ years ago on a Technical Marketing Program, was until recently with the Electronic Components Sales Division in Houston, Texas, his home town. He sold semiconductors, capacitors, relays and the like, and his territory included Houston, Austin and San Antonio, as well as the entire state of Louisiana.

"I really had to make every

sales call count because of the wide area assigned to me," says Traylor. "My customers were so far apart that there had to be a good reason to visit them—I always made sure there was by first lining up sales via regular telephone and mail contacts."

As his ECSD role was in a distributors' market, Traylor reports he saved both money and time by establishing a rapport with the major industrial distributors.

"The idea was to grow sales through the industrial distributors," he says, "so before they went on the road, I'd meet with them because we were selling to the same customers, and they could afford to make weekly sales calls to distant prospects."

The key to successful salesmanship, says Traylor, is rapport. "You've got to have a bond of friendship with the distributors, because they also



sell your competitors' products. And a salesman must establish good rapport with his customers, or his career is finished."

This sense of professional responsibility—this willingness to make that extra effort to win customers' confidence—helps Traylor and all the other successful GE salesmen get a maximum return in sales for every dollar of that seventy-dollar sales call price tag. **□**



## For women only

Women readers of the *Monogram*, we need your help!

We have a problem that we think you can solve for us, Miss Reader . . . or is it Mrs. Reader? Or Ms. Reader?

Well, that's the problem.

When the *Monogram* does a story about a GE man, it's easy. We simply say, for example, that "George E. Reader has been named to a new post in the Widgit Department" and the next time we use his name in the story, it's "Reader has been with GE 14 years."

No problem.

But if it's "Genevieve E. Reader" who has been named to that Widgit Department post, what do we say in the next paragraph?

"Miss" isn't right if she's married.

"Mrs." isn't right if she's not.

And since using just "Reader" in George's case doesn't indicate whether or not *he* is married, should a second reference to Gene-

vieve automatically publicize *her* marital status? Is "Ms." the answer? Should the last name only ("Reader") be used in second references to men and women?

Are "Miss" or "Mrs." valid alternatives?

You tell us . . . by indicating your choice on the coupon below and mailing it to the *Monogram* editor.

To: *Monogram* Editor  
W1 D2  
General Electric Company  
Fairfield, Connecticut 06431

In *Monogram* articles about GE women, second references to the women should take the following form:

- last name only.
- last name preceded by *Ms.*
- last name preceded by *Miss* or *Mrs.*

## Organization Changes

### MAJOR APPLIANCE BUSINESS GROUP

**Donald L. Awbrey**, General Manager—  
Home Laundry Manufacturing Department.

### POWER GENERATION BUSINESS GROUP

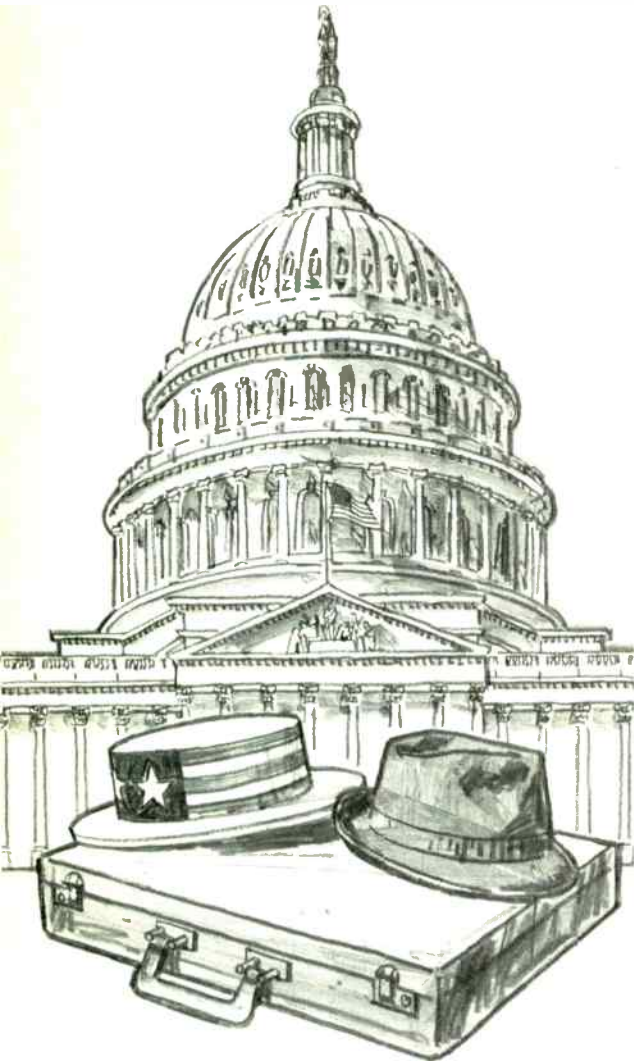
The Nuclear Energy Division has been restructured. A Nuclear Energy Programs Division and a Nuclear Energy Systems Division are established with **George J. Stathakis**, Vice President, appointed General Manager of the Nuclear Energy Programs Division and **Roy H. Beaton**, Vice President, appointed General Manager of the Nuclear Energy Systems Division.

The Company's turbine businesses have been reorganized. A Turbine Operations component is established and **Herman R. Hill**, Vice President, is appointed General Manager. The new organization structure of the Turbine Operations includes a Gas Turbine Division, an Industrial and Marine Steam Turbine Operations and a Large Steam Turbine-Generator Operations.

### SPECIAL SYSTEMS AND PRODUCTS GROUP

**David W. Farrand**, General Manager—  
Western Sales and Distribution Department, General Electric Supply Company Business Division.

# Government-business: exchanging



The President's Executive Interchange Program enables people from the private and public sectors to spend a year experiencing life in their opposite numbers' world. Vice Chairman Herman L. Weiss has served as Chairman of the President's Commission on Executive Interchange and remains a Commissioner. GE's strong support extends, as the following reports make clear, both to hosting government executives and to posting GE people in government assignments.

## My year in Government

By William H. Broach



My Interchange assignment was in Washington, a fascinating, dynamic city. The best indicator I've heard of the city's appeal is the term "Potomac Fever." It is, I can tell you, more than a journalist's tagline. When one is caught up in the whirl of Washington activities, one feels, inevitably, that this is *the* place—the hub of action for the country and the world.

The Fever develops because there is a sense of participation and involvement in important issues and events, no matter how mundane the individual's actual job may be. It's a feeling of being at the center of events—a feeling based

## My year in Business

By Paul T. O'Day



The British writer Ronald Knox had insomnia at the age of four, and when a family friend asked how he managed to occupy his time at night he replied, "I lie awake and think of the past." Looking back at the end of a year as a Presidential Interchange Executive gives rise to impressions as jammed up as those that must have beset young Knox. But I can start at the beginning and try to piece it all together.

"Business has no conscience." "Government is insensitive." "Corporations help themselves, not the country." "The bureaucracy is wasteful and inefficient." We were listening to committee reports at the end of the opening week's orientation conference for the 60 new business and government PIEs (the inevitable Washington alphabet-soup shorthand for the Presidential Interchange Executives). Committees of government participants about to enter corporations for their year's assignments had been

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# hats for a year

on the reality that Federal agencies develop programs and policies that impact all Americans. Developing, operating and influencing these activities is important work and can be extremely satisfying. I could see why people who come to Washington to stay for two years or so wind up becoming permanent residents—Potomac Fever has struck.

In my case, I was given ample opportunity to contract the Fever. An important element in the Interchange program is the educational phase that complements the actual work assignment. The Commission's educational program is geared to give Interchange people a broad exposure to government-related activities in Washington. Generally, weekly sessions were scheduled, and these enabled us to meet with cabinet officials, Senators, Representatives, officials in federal agencies, labor leaders, lobbyists, journalists and others. We also met with

the staffs of several foreign embassies.

In addition, three seminars were held during the year. The first was in September, when we attended a week-long series of meetings organized by the Brookings Institution. Federal and private-sector people participated jointly during the first three days. Then the government execs went to Boston to hear presentations to orient them to the business world, while those of us from the private sector remained in Washington to complete our orientation to the city and the Federal government.

For the second seminar, in February, the whole Interchange group got together again for a week in Brussels. There we participated in examining the European Economic Community, NATO and the constructive role that multinational corporations can play in Europe's economic development. We met with EEC officials, the Commander of NATO and officers of

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asked to identify the most significant problems facing business. A similar request to identify government's problems was given to committees of business executives who were about to start their year with Federal agencies.

The results were hard lines indeed, on both sides. Little was resolved in the discussions, but the reports were preserved for the wrap-up conference that would be held at year's end.

Then the arrival at our temporary new home. An exhausting move after seven years in the same place, four excited children and the most confused miniature schnauzer you have ever seen, all nearly lost in the big house we were fortunate to find available for rent. Trees and birds everywhere, and a huge lawn to be mowed, and firewood to be cut, and, and, and . . . Our garbage is all over the driveway on the second morning—what Washington suburbanite would think to guard against raccoons? One by one, the neighbors stop by, and my wife Nancy and I and the children begin friendships that will last long after we leave. All of us slip with unexpected ease into the normal rhythms of family life in our new setting. We agree on our good fortune. It is an enchanted place.

**The Interchange assignment at General Electric's new headquarters, as consultant to Robert M. Estes (Senior Vice President, General Counsel and Secretary), starts predictably enough. A pleasant office, friendly introductions, read this, what's your opinion on that, meetings, discussions, a few short papers requested, and I eventually start on a review of the contemporary corporate social responsibility setting for the Company—for which my associates provide enormous amounts of relevant literature.**

I decide to concentrate on a review of the Company's own social responsibility projects. Swamped again. I select an area not often reviewed in the literature—serving new social needs markets. The variety of the results is stunning: energy-saving heat pumps; quieter pollution-controlled turbines; new waste treatment equipment; Lucalox® street lamps with Lexan® protective coverings; and on and on. The diversity continues at the community level: direct support for charities; aid to schools and students; and health campaigns. When I look at one city in depth (Philadelphia), the Company's local educational and

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several multinational companies, including GE's Vice President Richard W. Foxen, who heads the Europe Business Division. We also visited the Russian embassy in Brussels.

The educational program for the year concluded with another joint public-private sector meeting in June. This gave us the chance to review our experiences of the past year and to learn how our evaluations of the "other side" had been altered by the Interchange Program.

**For my work assignment** in Washington, I chose the Environmental Protection Agency's Office of Regional Liaison. A few months after I went there, this office was consolidated with another, and the combined group was given the governmentese title of Office of Regional and Intergovernmental Operations. Naturally, this quickly got shortened to ORIO.

By Washington standards, EPA is not large. The Agency has over 9000 employees and an operating budget of about \$700 million. But it does operate grant programs that are second only to the Federal highway program.

Our work in ORIO was similar in many ways to headquarters staff functions in GE. We acted as the liaison between EPA headquarters groups and regional administrators, as well as with state and local governments.

There are ten EPA regions in the country, each headed by a regional administrator who reports to Russell Train, EPA's administrator in Washington. The regional offices are responsible for implementing, monitoring and enforcing the Agency's environmental programs.

In my position with ORIO, I visited regional and headquarters staffs, helping to keep each up-to-date on the activities of the other. The EPA regional people shared an opinion that's common among field people in business as well as government: "Headquarters doesn't know what's going on out here."

Since I had never been exposed to government operations before, I was not at all familiar with the process by which the government goes about implementing a law after it's passed by Congress. While I was at EPA, the Safe Drinking Water Act was passed, and I was able to watch the development of the various regulations by EPA to implement the new act. It was reassuring to see the steps the administrator and other high agency officials took to make certain that the rules and regulations applying to the act were not developed in the isolated "ivory tower" atmosphere of Washington.

Rather, EPA management directed that groups in the Agency that were developing the regulations should include both regional and

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MY YEAR IN BUSINESS *(continued)*

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minority business assistance projects alone nearly fill a book.

**At the corporate level**, just as many projects turn up, and they are just as wide-ranging. So much material is at hand that I can't even do a good job of classifying it. In the end I summarize the material as best I can, adding conclusions and recommendations.

It was some time before I realized how meaningful this quick immersion was to be—its immediate payoff was a broad introduction to the Company and to many of its key people, and over the remaining months this knowledge was an invaluable asset.

Other assignments followed—for example, one on background legal material for the annual statutory meeting of share owners (government sessions rarely get the kind of impressive staff support I saw in that effort) and, later in the year, preparation of a comprehensive report on business ethics.

Beyond work assignments, Interchange participants also take part in a broad-gauged educational program designed to stretch intellectual perspectives on business issues and provide in-depth knowledge in fields rarely encountered (or understood) by government bureaucrats. We were no exception in this regard and the Company went all out to give me and Dr. Martin J. Cooper (the other government participant at GE this year, a National Bureau of Standards physicist and science policy planner on assignment at the Corporate R&D Center in Schenectady) the widest possible opportunity to meet key officers, participate in briefings, and visit operating facilities.

The Company management team I encountered in all this held some refreshing surprises. As expected, I was meeting outstanding people—GE is widely known for the superb quality of its management. But I was struck by the variety of styles, backgrounds and disarmingly candid attitudes that turned up—products,

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“outside”—i.e., non-Federal—representatives. Thus a voice was given to state and local governments, utilities and environmental groups.

Also, there was a genuine effort to get comments from all interested people. Public hearings were held in several cities across the country.

Actions such as these caused me to see that EPA’s management, far from being a faceless bureaucracy, is a responsive, concerned group of people, working to implement the laws of Congress but doing so in ways that reflect the interests of the various constituencies.

**At times I did feel** the need to counter, among those in the Agency, a suspicion of industry and its motives. Industry was sometimes seen as being in an “anti” position and as being concerned only with costs and profits. The tendency was to believe that industry involved itself with environmental issues only because of the laws Congress had passed and that EPA was implementing. My year in Washington caused me to see, more strongly than before, the need for a sound balance between corporate financial results and the external effects of the industry’s operations.

On the other hand, I saw that it’s also necessary for the regulators and enforcers in agen-

cies like EPA to understand more fully the financial and operational impact of their activities on business. The recalcitrance and insensitivity that some businesses are accused of displaying on one extreme are, in my view, no worse for the country than the extreme environmentalist whose fondest dream is to keep the air and water pristinely pure even though achieving this would require all of us to return to caves up in the hills.

The Interchange Program had other benefits that were personal and family-related. My family moved to Washington and thoroughly enjoyed the year. Barbara participated in what had to be re-termed the “spouses” program when women began to serve in Interchange assignments.

One of the most memorable experiences for the children was attending the Christmas tree lighting ceremony at the White House when President Ford turned on all those GE lights. And inevitably I formed friendships that I will value for years to come.

In the end, though, I did not fully contract Potomac Fever. The antidote was provided by the offer I received to work in Brighton, England with Allen West-EAC Limited, one of the operations of the General Electric-Tube Investments joint venture.

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I decided, of the great diversity of the Company and its predominantly technical base.


Looking back, I wonder how so much was packed into so short a period of time. The range of topics and events amounts to a condensation of an entire career’s worth of experience. It had been such an expansive episode that, as it all came to a close, I and my family were apprehensive that a letdown might be in store at the end. Happily, however, we found ourselves anticipating a return to old places and friendships, even to the often-frenzied pace of Washington, with an excitement not unlike that of a year earlier. In a week or so we were settled back in as though we had never left.

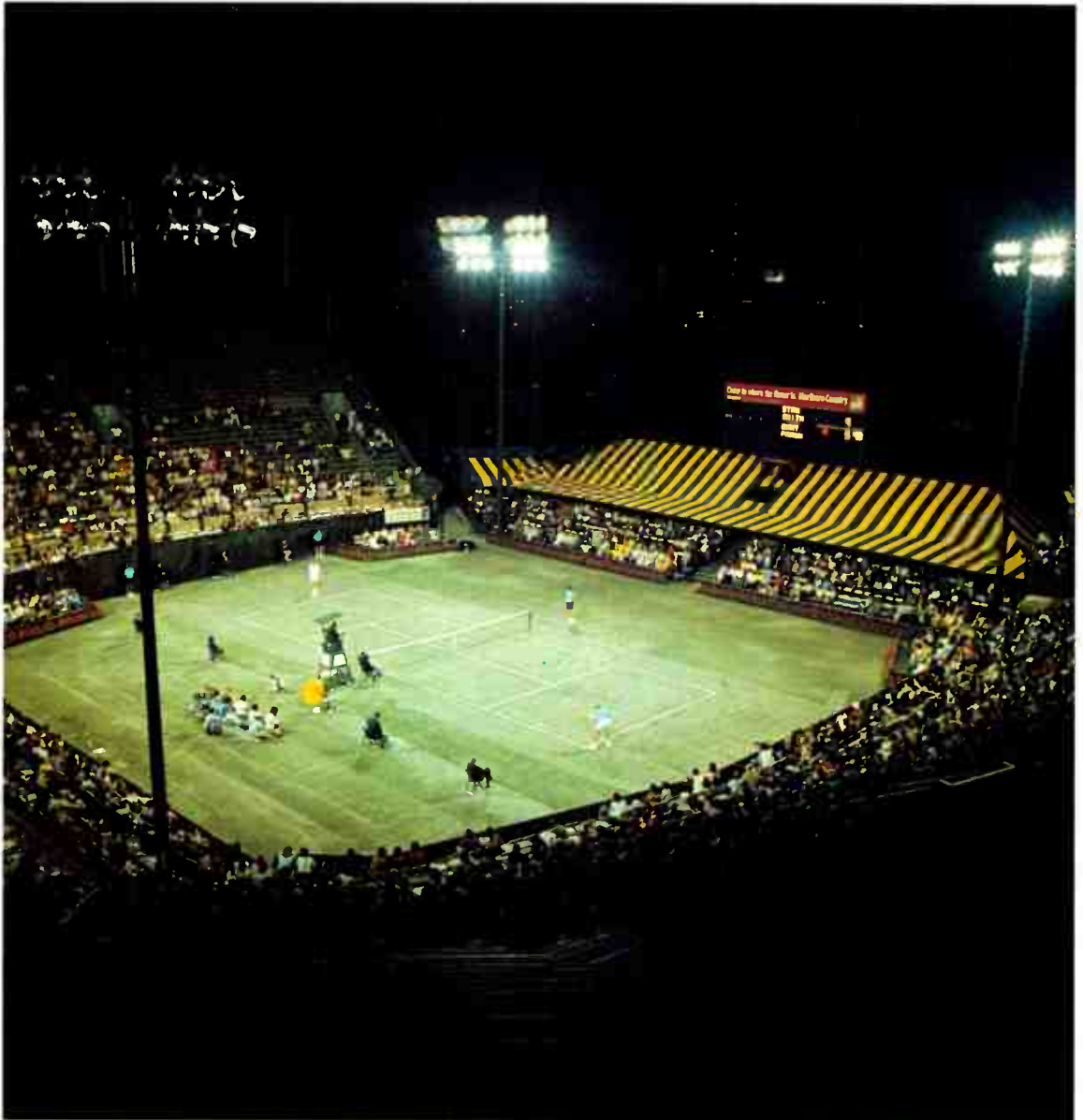
**What did it all accomplish?** There are no easy answers on the benefits of an experience so stretching and broad-gauged. Certainly a much better understanding of the realities of business life in this complicated and demand-

ing age has to be at, or near, the top of the list. Also, a clearer understanding of government/business relationships.

My conviction is that the personal dividends will flow for years. My hope is that this will translate on occasion into more effective government action, or possibly into more reasonable, constructive approaches to public problems.

Oh, yes. The year-end conference. The problems identified this time were remarkably similar to those raised in the opening session. But the voices were noticeably calmer, the reports more balanced. There was an unspoken but unmistakable respect in the air that seemed to replace the touch of glib cynicism at the earlier meeting. It was one small proof that the Interchange program works.

And there was a new job waiting for me in Washington—Assistant Special Representative for Trade Negotiations, concentrating on private sector liaison, in the Executive Office of the President. 



**CHAMPIONSHIP TENNIS IN A NEW LIGHT.** A General Electric lighting system at Forest Hills, N.Y. recently made possible the first night matches, above, in the history of the U.S. Open Tennis Championships. Four 60-foot steel poles, each carrying a dozen Powr-Spot® luminaires equipped with 1500-watt Multi-Vapor® lamps, were hoisted into place by helicopter at the famed West Side Tennis Club. The color-corrected system can provide varying degrees of illumination, from that required for regular play up to light levels needed for nighttime color television coverage. This year, Forest Hills played host to the world's top 192 tennis players during the 12-day U.S. Open.