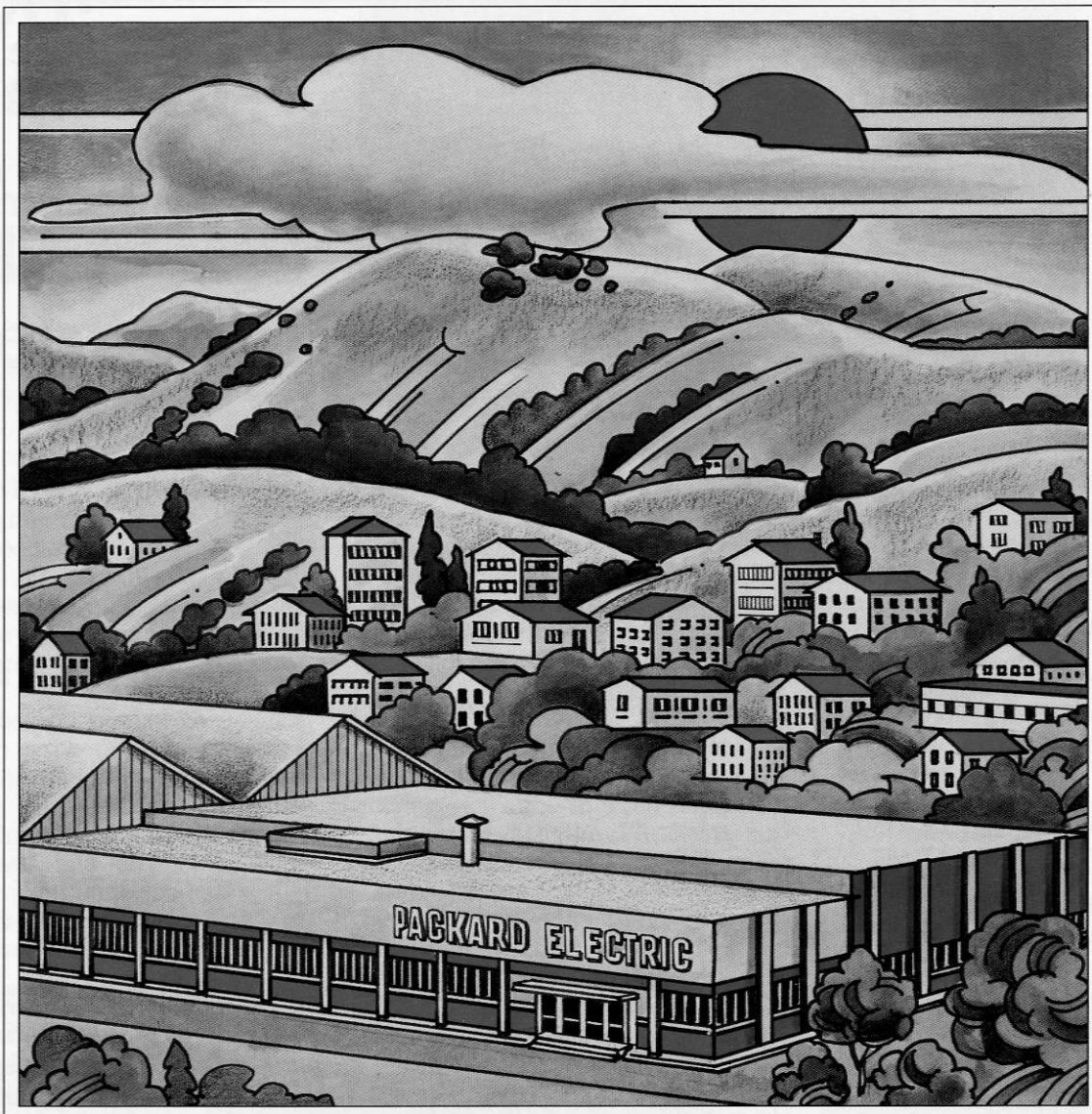
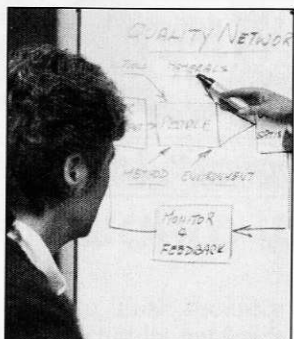


The Packard Electric GLOBE

The divisional magazine covering Packard's worldwide operations



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Packard Electric
do Brasil*



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Packard CTA is one year old.

The Packard Electric Globe

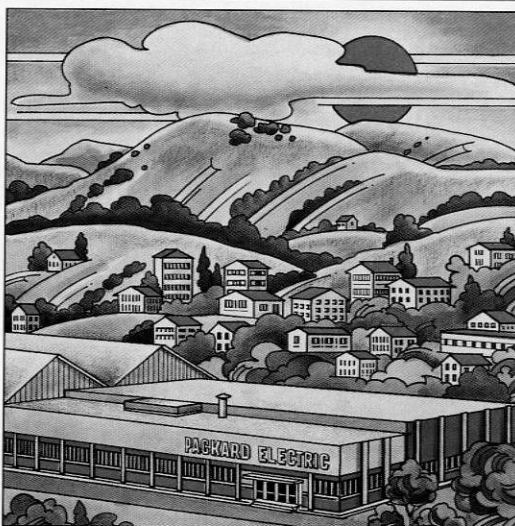
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On the cover:

Rick Muccio's illustration depicts Packard's plants in Paraisopolis, Brazil. See story on pages 8 and 9.

1990: A year of challenge and celebration



*Rudy Schlais
General Manager*

NINETEEN NINETY has been quite a year for Packard people.

It's been a year of celebration, as Packard people around the globe commemorated the division's "First 100 Years of Excellence."

It's also been a year of challenges. Competition in the global marketplace is stiffer than ever. We face increasingly tough demands from our customers to improve our quality, cost, responsiveness and technology. Our North American General Motors customers, our largest, have a major depressed market.

Packard's Plan to Excel mandates that we drive our costs down to an internationally competitive level by December 1991 — just 12 months from now. General Motors' recently announced schedule cutbacks — which mean lower production volumes for Packard Electric — will make it even harder for us to achieve our North American cost-reduction targets.

To better meet these challenges, we modified our divisional Mission, Objectives and Strategies to implement this global perspective.

Last month we announced another step in our effort to make Packard

Electric more globally integrated: a new, more synchronous and market-focused design for our North American operations.

Two business units added

Packard North America has added two major operating business units with profit and loss responsibilities: Power and Signal Distribution Systems, and Cable and Components. We have combined our Product and Process Engineering activities into an integrated engineering activity. We have also formed an Operations Support group which combines Materials Management and associated support activities such as Industrial Engineering and Manufacturing Planning.

This new structural design resulted from nearly 10 months of analysis, with input from the entire Packard organization. Our challenge was to provide a competitive advantage by linking our worldwide operations, yet at the same time be able to respond quickly to our customers on a regional basis. To address this need, we developed more market-focused business units which are still linked internally with other Packard operations around the world.

We also wanted to increase our focus on the Cable and Component market, which represents a major opportunity

for future business, while maintaining focus on our core business — Power and Signal Distribution Systems.

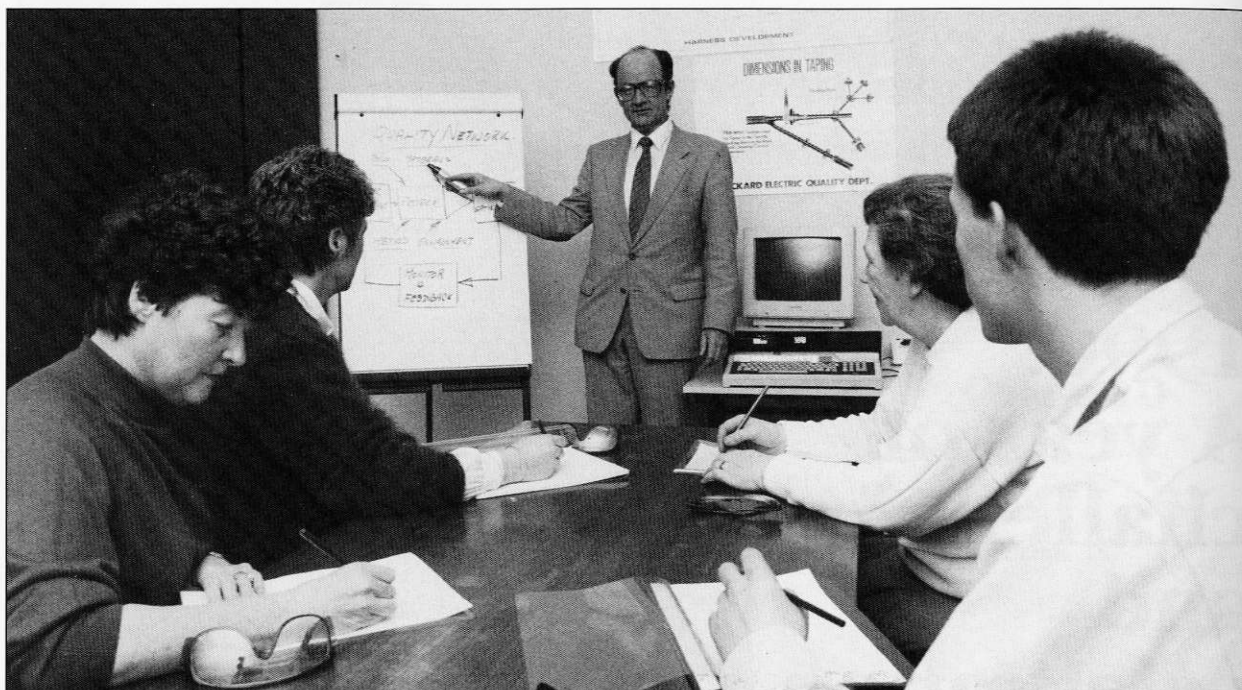
Packard's new organizational design enables us to look at the Cable and Component business from a different perspective. A market exists for these products outside the Power and Signal Distribution System business. This market, while extremely competitive, will be one of the keys to our growth and profitability going forward.

A new perspective

This latest aspect of our global reorganization activities enhances successes Packard people have already accomplished. Our operations outside North America are a major strength and continue to reinforce our global direction. Working together, we have created a company that leads the world in our business. Our commitment to Excellence will enhance our ability to work together for the customers' satisfaction.

As this important year in Packard's history ends and we begin our second century, I would like to thank Packard people around the world for their effort and wish you a joyous holiday season and a happy new year.

— Rudy Schlais
General Manager



Training Manager John Feely (standing) teaches a course at the Excellence Training Centre in Ireland.

Packard Ireland — 15 years later

Excellence Training Centre opens in Tallaght

When the Tallaght Plant started production in 1975, it had 100 employees working in the facility.

Now with 1,300 people and a recently opened Excellence Training Centre, Packard Ireland is the largest industrial employer in Tallaght.

Michael Martin of Packard Ireland remembers the plant's early days. "People used to drive fork-lifts around inside the building. And because the building was so big and there were so few of us in it, it was almost impossible to keep warm."

During that time, the original and only customer was Opel. Since then, the plant added Vauxhall, Ford, Bedford and Austin Rover Group.

As with the entire division, attracting these new customers requires a firm

commitment to Excellence, which is evident in the new Excellence Training Centre.

Excellence Training Centre

At the Centre's official opening ceremony, Ireland's Minister for Industry and Commerce Desmond O'Malley praised the far-sighted approach Packard used to achieve its objectives.

The Excellence Training Centre is "equipped with the most sophisticated training technology and systems" and is "a unique development in in-company employee training facilities in Ireland," O'Malley said.

"It demonstrates, in a way which is tangible, the company's commitment to the skills development of employees," he said.

Chief Executive of Packard Ireland

Hartmut Hengstwerth said, "The success of our enterprise here depends on our people. We have learned a great deal in our 15 years of operation and I have no doubt in my mind that with our focus on the customer and a commitment to Excellence, this great work force will be a very strong team which can stand up to any challenge in the years to come."

"The 1992 integration of European markets, the political and economic developments in Eastern Europe and the globalization of the world markets all mean more competition for us," he continued.

Hengstwerth concluded, "But they also represent opportunities which can be exploited by us if we can recognize the requirements of our customers and exceed them."

Lunny discusses changes

Packard Electric Europe Personnel Director Patrick Lunny visited divisional headquarters recently. **The Globe** staff had a chance to interview him about Europe.

Globe: Packard Europe is comprised of people from many different cultures who speak different languages. What strategy do you use to unify the work force and work toward common goals?

Lunny: The main focus will be on creating a Packard People Philosophy in Europe, which will enable our employees to identify with the organization initially on a national and European basis and later as part of the global Packard family. The Quality Network/Excellence approach will be the central part of this strategy.

With the European Community '92 looming on the horizon and the recent political upheaval in Eastern Bloc nations, Packard people in Europe are experiencing a lot of change. How does this affect our employees?

The changes in Eastern Europe have been widely welcomed throughout all of Europe. The pace at which they have taken place has taken most people by surprise and therefore created some uncertainty about the effects in both political and economic terms. During the next decade, the opening up of trade will create many opportunities to develop Packard Electric Europe's business. On balance, our employees view the changes as an opportunity rather than a threat.

Do you think Packard is better positioned than its competitors for EC '92?

Yes, but this must not evolve into complacency. We must vigorously protect our existing customer base and take advantage of every opportunity to develop new customers by offering the best technology and the best quality at the lowest cost delivered when the customer requires the product.

'During the next decade, the opening up of trade will create many opportunities to develop Packard Electric Europe's business.'

—Patrick Lunny

Packard Europe Personnel Director

What is your biggest communication challenge?

My biggest challenge is to develop among all our employees a sense of identity with Packard Electric Europe and the global Packard organization. At the same time, we must retain that sense of identity and closeness with a diverse customer network which has been developed over a number of years.

What major concerns do Packard employees in Europe have?

The concerns of Packard Europe employees are not too different from those of employees in the U.S. Long-term job security still remains the primary concern. People are also seeking more involvement in the business and the opportunity to influence decisions which directly affect them.

Tallaght: as described by those who live there

Unspoiled green landscapes surround Packard Electric Ireland in Tallaght.

Scenic fields and the Blessington lakes may be seen from the plant.

Pen, the newsletter for Packard Electric Ireland employees, reported, "There are other factors which make people living in the Tallaght area different, if not unique. Tallaght people have a wealth of character and a rich sense of belonging to the area in which they live.

"There has been abundant reference to Packard Electric's commitment to its people and to the development of their skills in recent times. At Packard Electric, we are acutely aware of the value of the people working in our company," **Pen** continued.

Marie Delves, an employee of the plant, said, "We all depend on each other, and at the same time, we help each other out. Not everyone gets a chance to experience that kind of cooperation. And they don't know what they are missing. I love Tallaght and I wouldn't live anywhere else."

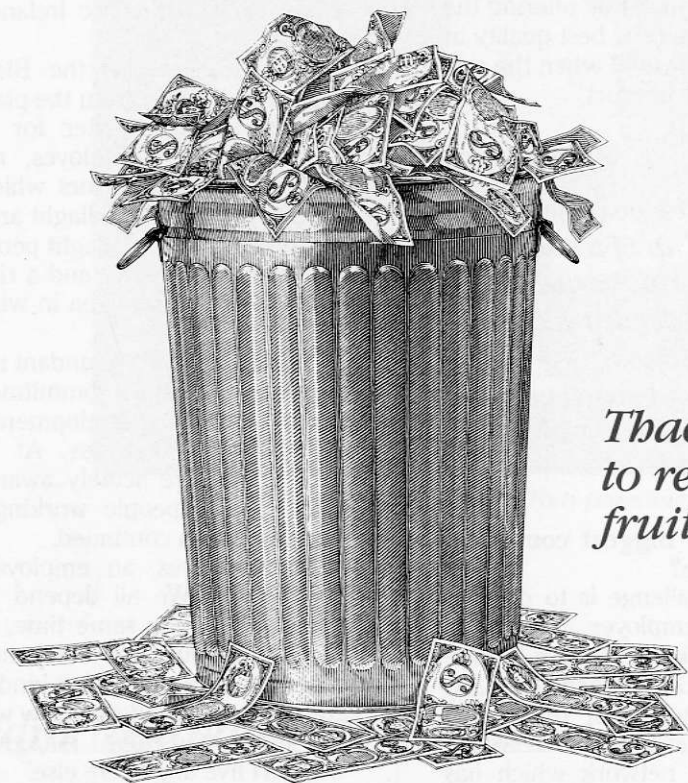
Pen concluded, "The virtues of living in Tallaght are well known to those who live here. And enjoying them is high on the list of priorities for people who enjoy the cheerful relationships developed with friends and neighbors down through the years.

"It is a close community where friends and neighbors help each other out."

The Packard Electric Ireland facility is located in Tallaght, Ireland.



Defect Control Center turns wastes into savings



Thacher Lane's 1986 effort to reduce scrap is still bearing fruit and saving the plant money.

What started out as a waste reduction effort in 1986 turned out to be a successful on-going program that is still bearing fruit for Packard's Thacher Lane Plant in Austintown, Ohio.

In fact, Plant 43 gets a lot of tour requests from people in the division, General Motors and outside companies wanting to see the aggressive waste reduction system.

Thacher Lane's system is an orderly one. The defect basket is caged in the Defect Control Center and opened once per shift for 30 minutes. A daily announcement over the public address system notifies employees that the cage is open. Each department in production is required to show up once per shift to deliver defects.

The defective material is not just tossed in the basket. Each lead is neatly

wrapped and identified by harness part number, lead number and defect code.

Plant 43 Superintendent Chuck Joseph said, "You know a program is successful when other people want to copy it for their operations. This has been the case for Thacher's Defect Control Center.

"In 1988, when I was superintendent of Plant 13, my staff and I visited Thacher to see first hand this waste center. Within two months, a similar system was adopted for Plant 13," Joseph noted.

Plants in Mexico reviewed the video tape describing the system and have since put in place similar programs. When Gary DeArment moved to Portugal to be the superintendent of Manufacturing Engineering at Cablesa, he requested the video and program manual, Joseph noted.

"Paying attention to detail and getting the people involved in understanding and participating in the program have been key in operating the Defect Control Center," Joseph said.

Dean Kirkland, quality control supervisor, added, "Employees at Thacher know how much everything they handle costs. This helps people respect the material — not just the good material, but all material."

How do we know it's working? Gary Blockinger, quality control technician, provided this evidence:

- In 1987, Plant 43 spent 31.2 cents per budgeted hour on defects, whereas in 1990, the cost of waste is less than .08 of one cent per budgeted hour.
- In 1986, it took the plant one week to fill seven baskets with defective wire. In 1988, the plant traded in its

Plant 43 plots its improvements in waste control

1986 — Plant 43's first attempt at waste reduction was a scrap cage, which was located in the back of the plant. Defects were collected in large cells which were returned to suppliers every few days.

1987 — Smaller bins replaced cells. The plant started a color coding system to depict the type of defect. Delivering defective material started on a daily basis.

1988 — The scrap cage moved from the back of the plant to the front and was renamed the waste control center. Bins proved to be too large, for it was taking a long time to fill them up, so Plant 43 used a reduced size waste container.

1989 — The waste control center became the defect control center. Every employee toured the center, so that all Plant 43 people had updated information on the progress of waste reduction.

1990 — A half-sized bin that was started in 1988 was finally emptied in August. Even though the bin was emptied, it wasn't half full.

regular-sized waste bin for a half-sized bin. A smaller container is needed, because after two years the plant still hadn't filled the half-sized container.

- In 1986, Plant 43 spent \$216,260 on defects and \$221,010 in 1987. The amount fell to \$36,409 in the 1988 model year, and dropped to \$4,360 in 1990.

Blockinger attributed the program's success to Plant 43's relationship with its suppliers, Plants 14 and 44.

Kirkland agreed, "The key to its success is communication. When a problem is noticed, we are able to find the source of the trouble through instant feedback."



photo: Roncone

This basket was finally emptied in August 1990 — after celebrating its second birthday at Thacher Lane.

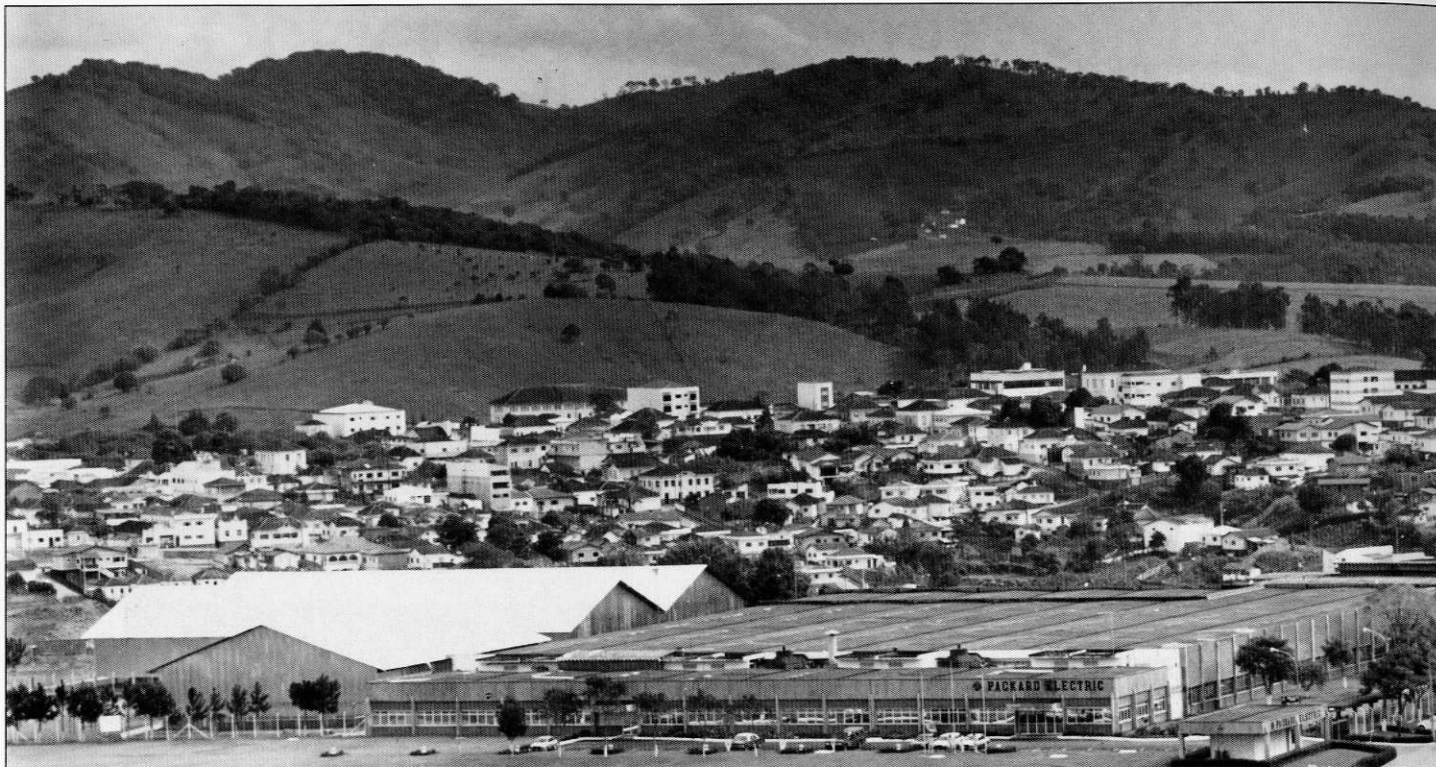
Thacher explains 'how to'

Gary Blockinger, quality control technician, Plant 43, listed the following suggestions for plants wanting to start a waste reduction program similar to Thacher Lane's:

- Gain support of the plant superintendent.
- Involve suppliers, so that all parties involved agree on a system.
- Educate all employees on how the

program will work and why it is necessary.

- Implement the system in small pieces. Don't go for the big picture at one time.
- Aim for continuous improvement.
- Welcome change.
- Assign a defect control champion to take ownership of the program.



Two Packard plants in Brazil are located in Paraisópolis or "Paradise City."

Packard Electric do Brasil

It's been almost three years since Packard Electric established a small office in Brazil.

Now boasting almost 1,500 people and four facilities, Packard Electric do Brasil (PEB) is ready to respond to the tremendous growth potential in Brazil.

Chuck Cunningham, manager, Assembly, Tooling Business Unit, recently returned from Brazil, where he served as the managing director of PEB for 2¹/₂ years.

"When I first arrived in Brazil, much of my time was spent coping with the incredibly high inflation rate and worrying about the volatile financial market. A great deal of energy was expended in price negotiations with both customers and suppliers," he said.

"Currently, the counter-inflation program, which has been a limited suc-

cess, has reduced inflation from 80 percent a month to 10 percent a month. This, in itself, has made doing business in Brazil less complicated. We can concentrate on servicing our customers.

"Economic stability helps our employees. Now they don't have to worry about spending their money before an item increases in price," Cunningham noted.

Brazil's President Fernando Collor is attempting to create a free market economy, which will allow competition to grow and position Brazil in the world market.

"Packard Electric do Brasil welcomes this because we feel we will have a lot of opportunity in this market," he said.

Already PEB has gained design responsibility for all future GM wiring

in Brazil, resulting in a rapid increase in Packard component usage by GM do Brasil. For example, in 1989, less than 1 percent of the component content on a GM do Brasil vehicle was from Packard. In 1991, PEB will claim 35 percent.

Cunningham noted that by localizing a percent of the components, PEB is able to import components from Ohio and Mississippi, thus creating an additional market for Packard's U.S. component operations.

Tapping into the growth opportunity in Brazil is PEB's charge. PEB is negotiating with Fiat, Volkswagen and Ford for additional component and assembly business for the 1992 model year.

Cunningham concluded, "Packard Electric do Brasil won new business by being competitive in price and superior in quality to our competition."

Jabes Cabral

Packard Electric do Brasil's operations manager shares his views on working and living in Brazil.

[Editor's note: Cabral first heard of Packard in 1986 when he started working on a project for Packard do Brasil. In 1988, he officially transferred to Packard as plant manager of the Paraisopolis plant.]

“When I started with Packard, I left behind 28 years of work at General Motors do Brasil, a prosperous and considerable size company with strong bonds in the country since 1925. I started with GM do Brasil in 1959 as an apprentice and by the time I left, I was a manager.

This decision was hard for me, since I felt like GM do Brasil was an asset, and Packard Electric was an unknown entity.

On top of that, my experience in the wiring harness business was minimal, indicating that I should go through a complete learning process starting from the basics.

After some consideration, I faced the challenge of becoming the first Brazilian Packard employee. This surprised all of those who used to work with me. They wondered how I could leave behind all my years with GMB.

The answer, however, was as simple

as this: trust. Trust in both Packard's future in Brazil and trust in Packard's people. In fact, if it were not for the people, chances are I never would have made the decision to join Packard.

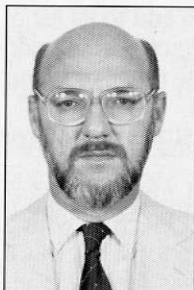
Three years have gone by since and I feel I am one of the proudest Packard Brazilian employees because I believe in this organization, which taught me how to understand its philosophy, its mission and its principles — the Packard principles.

Organizations, however, do not exist without caring people. Consider, for example, that PEB is located 10,000 miles away from the headquarters in Warren, Ohio, yet this never became a hindrance or excuse preventing us from receiving any kind of support from our parent company.

Every person I have ever had the opportunity to deal with at Packard has been a valuable source of information and help. The willingness to cooperate is outstanding, beyond my expectations.

Packard is number one and the world leader in the power and signal distribution system business for the automotive segment. I really am proud to be a part of this organization.

Packard Electric do Brasil is an ever growing company with extraordinary accomplishments in both technical and market share areas. I take pride in being part of this process.”



Cabral

Packard Electric do Brasil at a glance

Engineering and Commercial Office

city — Sao Caetano (also called Sao Paulo)

function — houses Packard Electric do Brasil's purchasing, sales, financial, product engineering and administrative employees.

employees — 35

EPEC

city — Sao Jose dos Campos (1½ hours north of Sao Caetano)

function — Packard's joint venture with Ericsson do Brasil, which produces metal and plastic components for automotive and telecommunication markets.

employees — 650

Assembly Operations

city — Paraisopolis or “Paradise City” (3½ hours north of Sao Caetano)

function — Two assembly plants located next to each other where harnesses are built for GM, Volkswagen, Ford and several device manufacturers.

employees — 800

EMPLOYEE TOTAL — 1,485



The assembly operations in Brazil build harnesses for GM, Volkswagen, Ford and others.

From the land down

UNDER

During its first year, Packard CTA, the division's joint venture with Carthew and Travaglini Pty. Ltd. of Australia, expanded its customer base, the number of employees and the floorspace.

In the next few years, the number of employees is expected to double to more than 300 to handle the newly awarded business from GM-Holden's Automotive Ltd. and Nissan of Australia, according to Peter Carthew, one of the founders of Carthew and Travaglini Ltd.

Packard CTA will pursue more Australian domestic business opportunities to add to its list of 120 clients.

And additional space is being added to an existing building — making it three times the space of the old building, or 130,000 square feet.

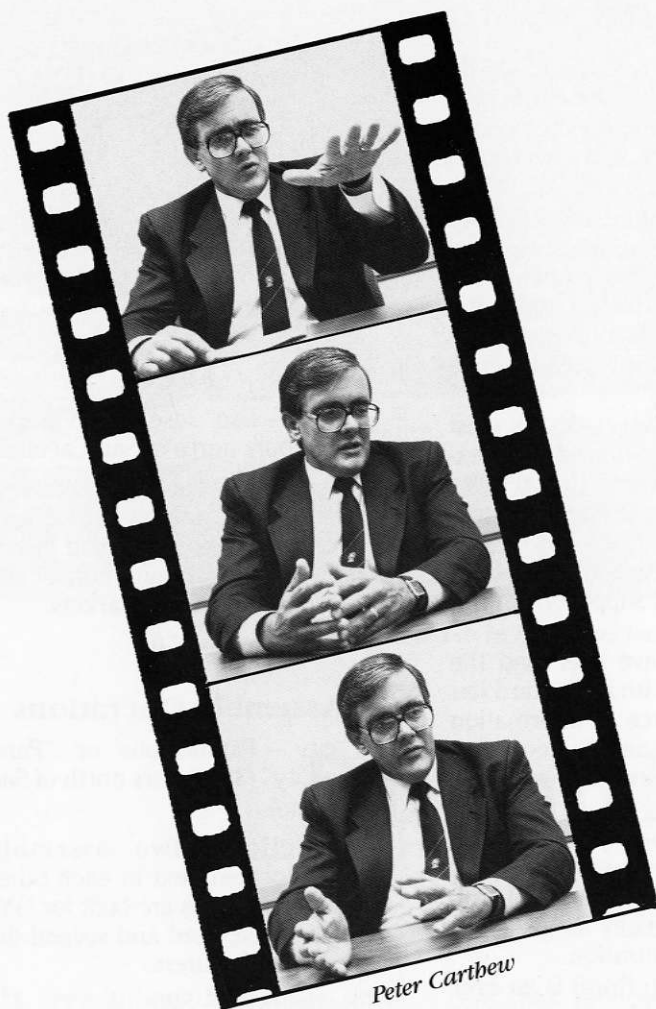
Carthew said Australian employees are starting to adjust to the joint venture.

Ararat is a small town with only 9,000 people. That's why joining Packard Electric, with 55,000 employees worldwide, is a big change for what was a small company.

"At first, there was fear. Our employees saw too many bigger companies come to Ararat, take over a smaller company, function for a short time and then leave town. I would say now everyone is very accepting of Packard.

"They love the opportunity to further their careers and ensure job security. There are only 23,000 people in the surrounding area of Ararat, so working for a large company is exciting and offers lots of opportunities," he noted.

While doubling the work force in the next few years is "exciting, it will be quite a task," Carthew said. "We don't want to lose the family feeling, so it's up to each supervisor to carry this family feeling into his or her area. With the



Peter Carthew

Construction is taking place at Packard CTA. On the left is the new addition, while on the right is the existing structure.



proper strategy and the process well-defined, we will be okay.

"On the other hand, we want to get used to a large organization, the international flavor and the global aspects of our business," he noted.

Packard CTA plans to handle this expansion by providing employees with lots of training so that they form good habits from the start.

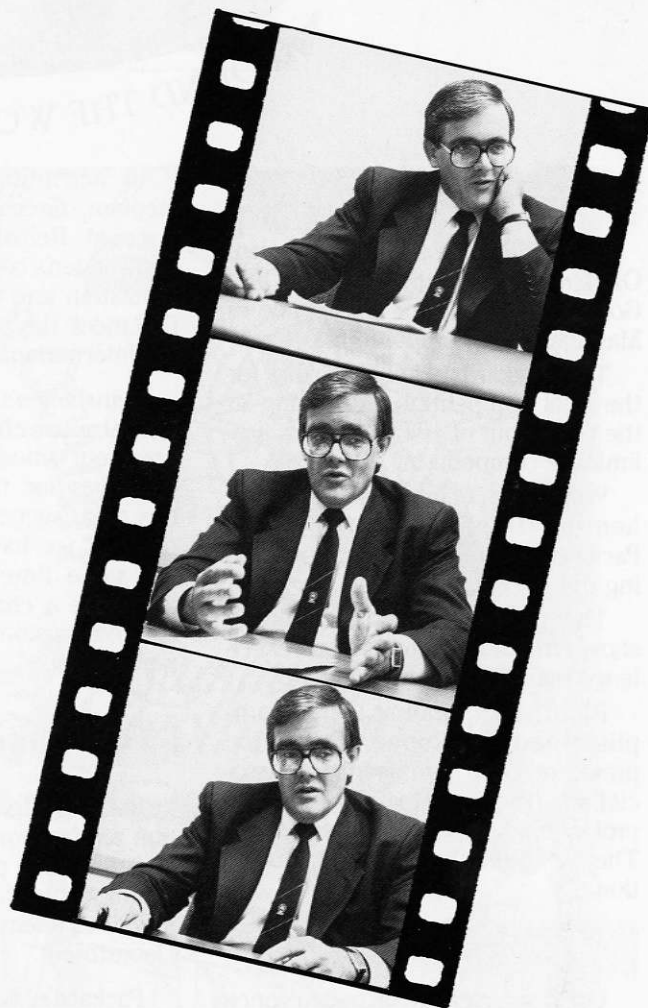
Australia teaches Excellence in a similar style as used in Mexico, Ohio, Mississippi and Europe.

Carthew said Packard CTA can learn a lot from Packard Electric. "We need to put together up-front planning and strategy instead of making quick decisions. Packard does a lot of research and planning and we can benefit from that.

"In addition, we can improve our team skills for Americans team up a lot better than Australians do. We seem to be more comfortable one-on-one," he said.

"But we will always push for progress. That's my business philosophy. CTA has grown more than we thought it would. You can't be satisfied with your business as is; you have to be willing to drive it past that," Carthew said.

He concluded, "Business is built on person-to-person relationships. You can't have a successful business unless you have people."



Once the new section of the building is completed, the floorspace will equal about 130,000 square feet.



Plant 10

Three Plant 10 teams in Warren, Ohio, recently competed in the Ohio Governor's Award for Excellence in Manufacturing competition.

The Packard teams qualified for the final competition by placing in the top 16 out of 104 teams in a preliminary competition.

While the teams did not bring home a trophy from the finals, Packard was the only location having three teams to qualify.

The competition was hosted to show what it takes to achieve excellence in manufacturing in Ohio.

Plant 10's teams were complimented by Robert Day, vice president, Ohio Manufacturers' Association, "Packard's teams were very professional in their presentations. They're well-schooled, just exceptional."

Reinshagen

Opel selected Reinshagen once again as its Supplier of the Year. This prestigious award for continued efforts to improve quality, service and cost was awarded to Reinshagen at a ceremony near Brussels this summer.

In accepting the award, Fritz Stephan, director of Quality Assurance at Reinshagen, emphasized Reinshagen's continued efforts at optimization and cooperation in order to meet the growing demands of the international market.

Reinshagen's employee newsletter, **Kabelmannchen**, said, "We express our sincere thanks to all our employees for their contribution to this great success. We can be proud of what we have accomplished. At the same time we should let this award be a challenge to us to support our customers with yet greater performance."

Division retains spot

Packard Electric retained its position as the world's largest producer of automotive power and signal distribution systems in 1989, according to figures released by Packard's Sales Department.

Packard's worldwide vehicle wiring market share for calendar year 1989 totaled 20.5 percent, an increase of 0.5 percent over the previous year and a full 2 percentage points over Yazaki, its nearest competitor, according to Ward's 1990

Yearbook and the Packard Marketing Department.

Colmotores

Representatives from Colmotores, General Motors' South American affiliate in Colombia, visited Packard Electric's global headquarters in Warren, Ohio, to explore the possibility of doing business with Packard International.

Vehicle sales at Colmotores are escalating. During the first 10 months of 1990, Colmotores led the country in Chevrolet sales, reaching 44.8 percent market penetration in October, its highest penetration since March 1989.

Clinton

Packard's Clinton location in Mississippi wrapped up its celebration of the division's First 100 Years of Excellence at the Packard-Clinton GM car show and sale.

Serving as the centerpiece for Mississippi's centennial observance, the three-day car and truck show featured 200 new GM vehicles. This enticed 68 employees and family members to buy new GM vehicles.

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